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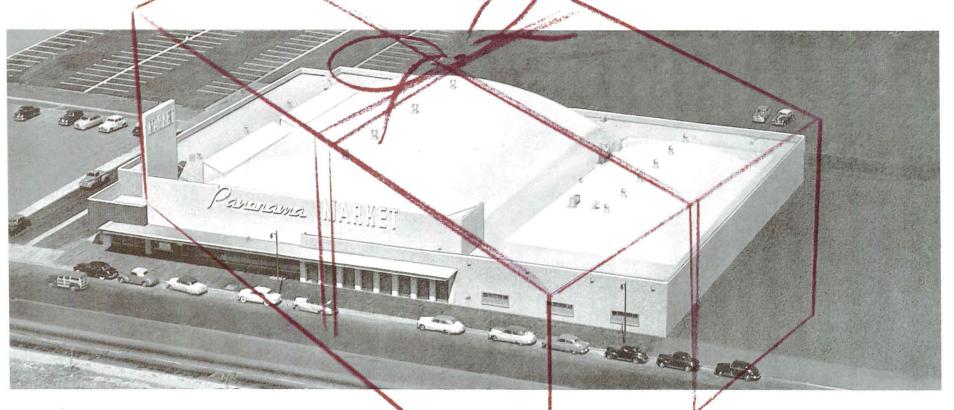
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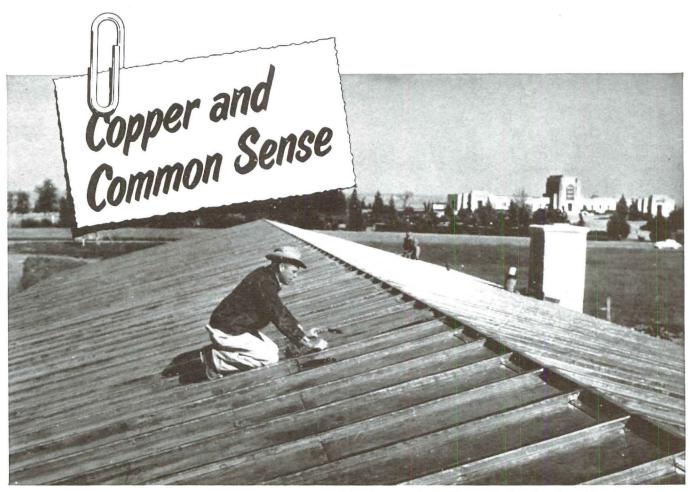
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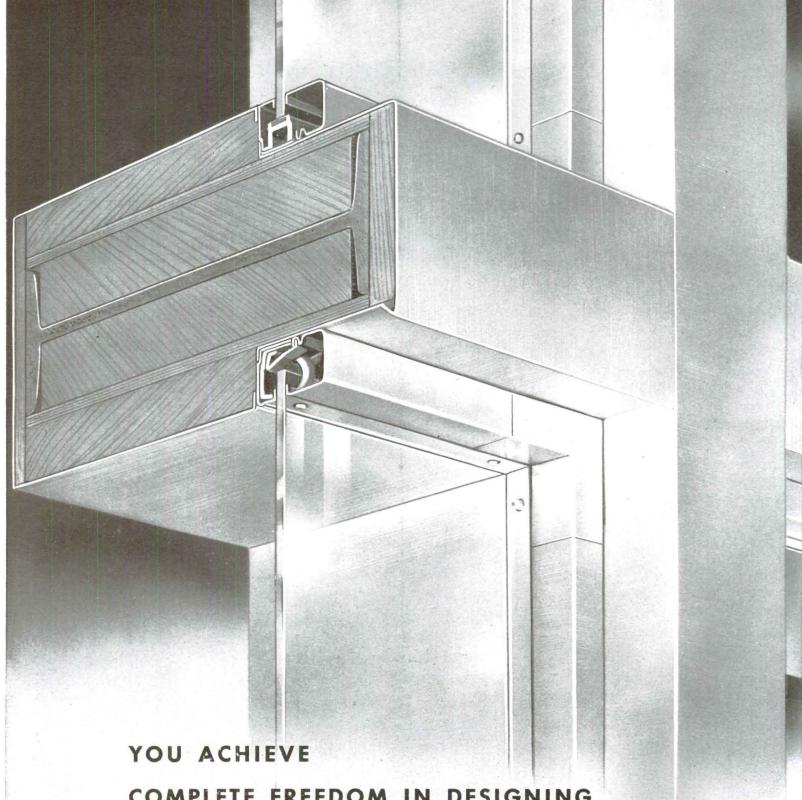
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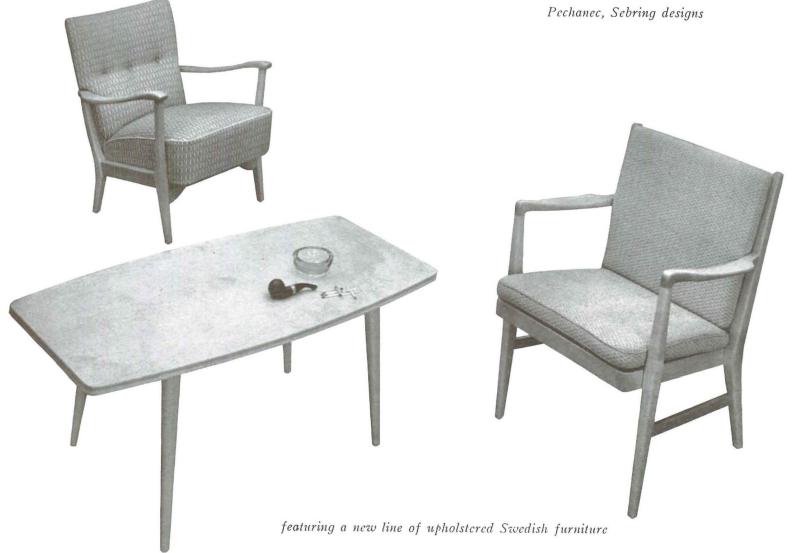
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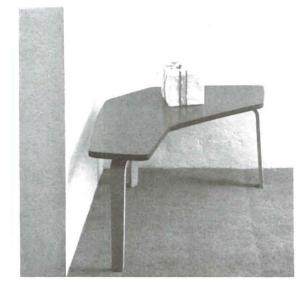
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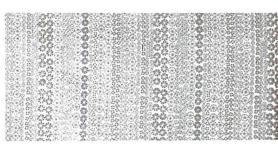
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BOOKS

BYRON PUMPHREY

GENERAL THEORY OF VALUE—Harvard University Press; \$7.50—This book makes available a standard treatise upon a subject that has become a major topic of philosophy. Value is conceived by Dr. Perry in terms of interest. Any interest is perforce invested with value. The body is an instrument of interests. Hence it is necessary to consider man's biological needs. This constitutes the biological approach to interest. Next in order is a psychological definition of interest and so on to a sociological one.

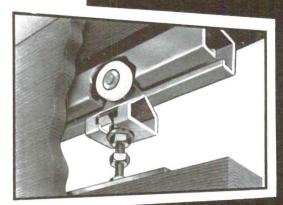
At all levels the problem is one of integrating interests rather than denying them. To deny an interest is to deny its value. But interests exist independently of their denial. All have value therefore and must be taken into consideration. The principle invoked is that of inclusiveness.

The process of integration is exceedingly complex at all levels. Integration of the personality occurs when "one interest comes to mediate another, or yield to its control." The interest is subordinated but not defeated. It may be allowed to fulfill itself at another time. There is, however, a "fundamental difference between personal integration and social integration, which consists in the fact that the principle of subordination is operative in the one and inoperative in the other." One cannot achieve a harmonious society by the application of such a principle. Such harmony can be achieved only through universal love.

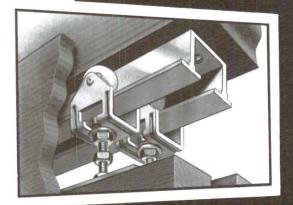
Dr. Perry examines all of his data—biological, psychological, and sociological—with rigorous logic. While the method he employs will no doubt serve to enlighten philosophers, it only obscures his meaning for those unversed in discipline. The process by which he reaches his conclusions will seem much too involved.

OUR RELIGIOUS TRADITIONS—Harvard University Press; \$2.00—another professor of philosophy, Sterling P. Lamprecht, renders an absorbing account of the evolution of three ideal values of western

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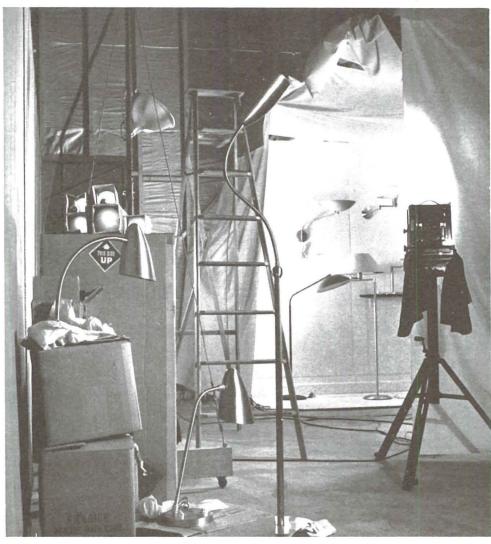
culture. Judaism, Catholicism, and Protestantism are values which men have deemed of supreme worth. Each, he finds, has its special merit and civilization would suffer irreparable loss should the values which each affirms be lost from view.

The value of Judaism lies in its conception of "a community of mankind within the moral structure of a sheltering and sustaining covenant." Its role is to show "how life is qualified when it is lived in the recognition of the way in which all men are bound by covenant in an embracing unity." The implications of this idea have yet to be worked out. Meanwhile, its inherent richness suffers. Orthodox Judaism conceives it in too narrow terms, while Reform Judaism is losing sensitivity to it. Only Conservative Judaism, apparently, is on the right track.

In evaluating Catholicism, Dr. Lamprecht stresses, one should distinguish between what is Roman and what is Catholic. The former has been superimposed upon Catholicism; it is the character which the Church acquired "when it sought to succeed to the privileges of empire, to sway the minds of men by its imperial power, and to use the instrumentalities of civil states for the ends of morality and religion." The special value of Catholicism lies in its store of traditions, moral and cultural, from which men might obtain discipline. But in asserting the value and vitality of tradition, the Church has resisted change and experiment. "It has confused the laying of a sound foundation on which men might then further build with the preparation of a mould into which human nature was to be poured over and over again . . . asserting too much the finality of its vision."

Dr. Lamprecht characterizes Protestantism as an adventure. Its value is at the same time a problem—the problem of the nature of freedom. By freely choosing the position he will assert, the Protestant is obliged to give content to his freedom. Such is the essence of his adventure. And if Catholicism errs in its rigidity, this tenet of Protestantism is not without its dangers. From this flows its divisive nature and its tendency to ride some idea without regard to the larger contexts. In the author's judgment it has been lacking in sensitiveness to the values of intellectual and





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moral legacy. More wisdom is needed in using the freedom it has the courage to assert.

Dr. Lamprecht finds that the fundamental ideas in each of these three great religious traditions are compatible and morally supplementary. And in the United States, more than elsewhere, he believes, the chances of an association of the three ideas is possible. By invoking the principle of inclusiveness, the author arrives at the same point as Dr. Perry. In so doing he would add yet another religious insight—that of Hellenism. He defines this as "the critical spirit which, taking whatever religious beliefs and practices lay about it, sought their ethical purification, their intellectual clarification, their enoblement." Such a spirit would tackle the basic problem of power and value. Are certain values in principle supreme or do they take their value because they are believed to have behind them the power of God? If the former the differences between theist and atheist are transcended. Both are brought into moral unit, however they may differ regarding the presence or absence of a Creator.

THE CLASSICAL TRADITION—Oxford University Press; \$6.00—The book traces the chief ways in which Greek and Latin culture has moulded the literatures of western Europe and America. Gilbert Highet writes with simplicity, verve, and charm. He infuses his subject with a warmth that completely dispels the cold scholasticism into which it has been frozen by so many educators. The zest he instills or renews in us for the classics springs in part from his insight into literature as a spiritual experience.

The effect of Greco-Roman culture on certain modern writers is explicitly dealt with in two chapters. One, The Symbolist Poets and James Joyce, gives a rewarding account of how Joyce and T. S. Eliot have used Greek legends to reveal the meanness of modern life. The very titles of such poems as Eliot's Sweeney Agonistes and Sweeney Among the Nightingales are a pointed comment on the contrast between the civilization of Greece and our own.

The other chapter dealing with modern writers concludes Mr. Highet's book. Entitled **The Reinterpretation of the Myths**, it is a fascinating analysis of the works of Gide, O'Neill, Jeffers, Cocteau,

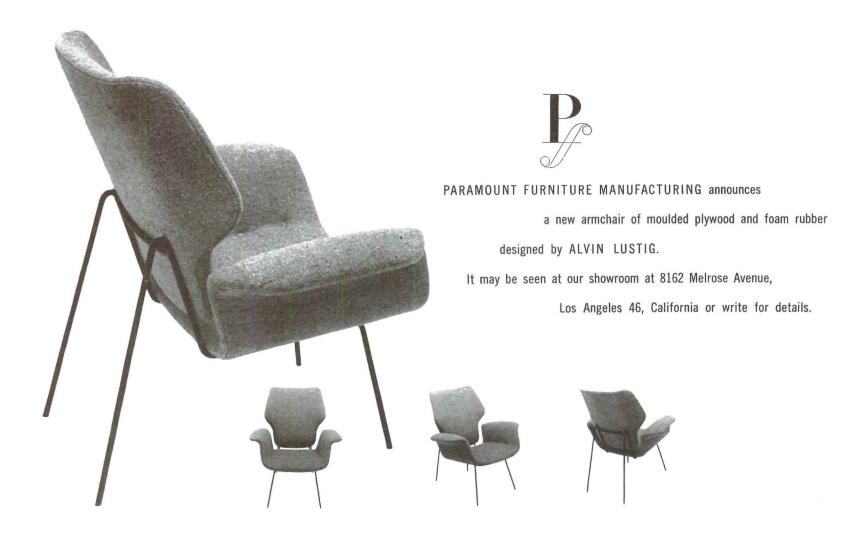
Satre, Camus, and others. Before getting to the authors, however, Mr. Highet sums up for the reader the various theories on myths by Muller, Frazer, Freud, and Jung. He finds that few of the moderns treat the myths as symbols for the unconscious. Most prefer to use them as the Greeks did, imbuing them with moral and political significance for a contemporary audience. But it is here, he writes, "that the neo-Hellenic dramatists join hands with the psychologists, for they know that every great myth carries a deep significance for the men of every age including our own."

If some myths are so profound as to be ever significant, needing only to be re-interpreted, there are still others from which we need emancipation.

VIRGIN LAND: THE AMERICAN WEST AS SYMBOL AND MYTH—Harvard University Press; \$4.50—Henry Nash Smith writes a penetrating study of the part "the myth of the garden" has played in the development of the West. His book is a rare blend of historical writing and literary criticism. Whether dealing with Leatherstocking, the dime novel hero and heroine, the work of Hamlin Garland or the social and political scene, Mr. Smith casts a revealing light on his materials. It is however, in his analysis of the myth of the garden that he makes his most signal contribution.

While the garden performed its function as safety valve for a considerable time, it was no sooner settled than the forces of industrialization and urbanization caught in their toils the sturdy yeoman farmer was to dwell there in a perpetual state of idyllic bliss. The image was indeed so powerful that the American farmer himself often remained blind to his plight. Among the consequences of the myth has been the tendency to account for any evil which threatened it by ascribing it to alien intrusion. Such is the core of isolationism, which is based on the belief that the disasters that might threaten other countries could not involve the inhabitants of this new Arcadia. This has "made it difficult for Americans to think of themselves as members of a world community" although connected with the course of events in Europe and Asia.

Turner's frontier hypothesis and the myth of the garden, while affirming "an admirable set of values . . . ceased very early to



be useful in interpreting American society as a whole because they offered no intellectual apparatus for taking account of the industrial revolution."

The judgment is one in which Turner himself concurred in 1924 and which is quoted by the author. Turner placed his ultimate trust in the mind of man seeking new ways of adjustment. Could it be that we might yet realize Plato's vision and become citizens of the world? Is the concept of unity in diversity foredoomed to remain an ideal value or is it one that can be realized by men desiring to dwell in peace?

CINEMA

ROBERT JOSEPH

"The Men," the new Stanley Kramer Production, is surely one of the most carefully made films in a long time. Kramer is the producer who has electrified the motion picture community with "Champion" and "Home of the Brave," and his decision to base a film on the life and times of paraplegics at Birmingham Hospital-or any other veterans hospital—is as courageous as it is timely. I stress "carefully made" as the first expletive in this review, for the evident and abundant care is the key to the understanding of this important motion picture. It required care, in the first instance, in planning the film, for Kramer must have surely known that there is an automatic audience rejection of the theme and the sight itself of wheel-chair cases. One of the members of the cast refers to himself in his physical disability as a "bug." People look upon him as a bug, and he is squarely right. Kramer must have spent a long time before deciding to make "The Men," and having reached that decision decided to give it the best of everything.

And the best of everything is reflected in the careful writing by Carl Foreman, who also wrote the earlier Kramer productions, and the production designing—that process which sketches out the picture continuity in its entirety before the story reaches the camera

stage—by Production Designer Rudolph Sternad. Film Editor Harry Gerstad, the man who won this year's Academy Award for his cutting of "Champion," is the third member of the quadrumvirate responsible for the occasional excellences of this unusual and provocative picture.

It is condescending on the part of film reviewers and critics to say that a producer merits an "A" for effort, which is damning with faint praise, indeed. Kramer has tried valiantly; and yet "The Men" is not the great picture that the industry had anticipated it would be. There are fine individual performances throughout, and special words of praise must be accorded Everett Sloane, who plays the role of the hospital chief; Teresa Wright, as the patient and understanding girl; supporting players who enact the very real and very poignant roles of the afflicated; and Marlon Brando, fresh from "Streetcar Named Desire" and Tennessee Williams, who sparkles. But sparkling suggests, too, that there are intermittent moments of vapidity. And the shortcomings of "The Men" rest partly in Brando, and partly in the direction of certain scenes and sequences by Fred Zinnemann which required a sublety and a deep, inner understanding which were obviously beyond him.

You must see Marlon Brando to know why his strange performance misses. He plays the animal-nature-boy role which he did so effectively in the Williams play on Broadway. Under the circumstances you are not willing to accept the fact that sensitive and intelligent Teresa Wright is prepared to make the necessary sacrifices attendant upon a marriage of this sort. She is too sophisticated and far too sensitive to accept the brutal, earthy gruffness of Marlon Brando. It occurs to me that Brando overpowered the director early during production, and after that Zinnemann never had a chance.

But beyond the unorthodox performance by Brando, and the occasional flagging direction of Zinnemann, the man who directed "The Search," there is one serious failure or oversight which merits special mention. Despite the proximity of the theme of "The Men," despite its constant allusion to the War, despite proximate reality, it lacks a real sincere touch of topicality. The men themselves in their daily conversation—and we are given long and fre-

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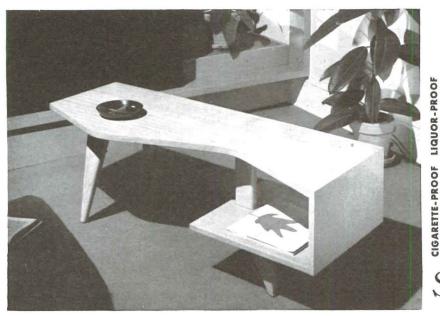
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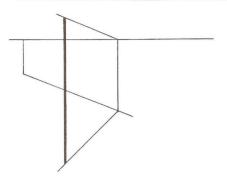
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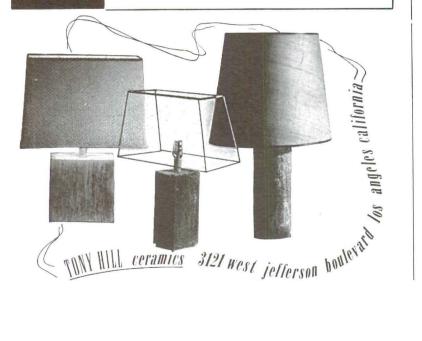
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quent examples of it—are oblivious of the old War, are indifferent to the obvious lesson to be drawn from their own physical state, and are seemingly unaware of the need to prevent another similar catastrophe in the future. The Men who work out in the gym, wheel themselves back and forth through the hospital corridors, take their therapeutic exercises in the hospital pool are dramatic and eloquent arguments against war. Yet their mental lassitude on this subject in "The Men" seemed unreal if not untrue. On occasion I have made trips to Birmingham to give informal talks on stamp-collecting, and I frequently stayed around to "bull." The Men expressed strong views on many subjects—including the subject of Peace.

Lest it appear that I am forcing a critical issue where none exists, or lest it appear that I am trying to read something into a picture which has no counterpart in the daily reality of The Men, let me make myself clear. "The Men" misses being a great picture, great in the sense that I consider "The Bicycle Thief" great, because it begs or ignores the central theme of what "The Men" is really about. Nor do I mean that Producer Kramer or screenwriter Foreman have obligation of giving us a "message" in "The Men." I am unalterably opposed to "message" films which are invariably dull, pontifical, overzealous and bad cinema. But when this viewpoint about the futility of war is so fundamental to The Men as it unquestionably is, it would seem cavalier, to say the least, to overlook it, side-step it, or ignore it. No man can lose the use of his limbs as a result of battle without feeling and expressing anger at the chaotic kind of world which did this to him.

MUSIC

PETER YATES

The Mean Tone Temperament

For a long time I had been thinking of the possibility of reviving the mean-tone temperament, the system of tuning instruments used throughout the latter XVI, the XVII, the XVIII, and the start of the XIX century. Then I became acquainted with Paul Kegley, a retired businessman and teacher, who has taken up piano-tuning as a practical hobby. Some time later Paul told me that he had tuned one of his pianos to mean tone and would like me to try it. "Where did you learn how to tune it?" "Oh, out of White's book on pianotuning." (William B. White: Modern Piano Tuning and Allied Arts, the appendix on Mean Tone Temperament).

I gathered up an arm-load of music and drove over. After two sessions, totalling about eight hours, I was convinced that the tuning was correct, and that our complete ignorance of the meantone temperament, the sound, qualities, harmonic and stylistic practices common to more than two-and-a-half centuries of comparatively modern music, is one of the most serious blind spots in esthetic-historical scholarship. Since then I have had my own second piano tuned to this temperament and have given much study to the keyboard literature of this period. Apart from any bookish considerations, so great is my delight in the beauty of this fresh world of sound, and my understanding of the evolution of musical style has been so much altered by it, that I have decided at length to pass on to others a summary of my experience and tentative conclusions.

Discussion of the mean-tone temperament is ordinarily limited to negative sentence or paragraph. For instance Percy Scholes (The Oxford Companion to Music) remarks: "The organs of Bach's day and Wesley's were not tuned 'perfectly'; they were usually tuned in some Mean Tone system—which term cannot be explained fully here; it refers to a system of temperament based on the major thirds being accurate and the other intervals adapted. In this system about six major keys and three minor were very tolerable, but beyond that occurred a horrible out-of-tune-ness picturesquely nicknamed 'The Wolf.' Instead of the few big wolves of meantone temperament there are nowadays (in our equal temperament) a large number of little wolves—so little that their howls are unheard save by very keen-eared people."

Scholes explains in a footnote that "equal temperament" refers to the unfortunately named (for scholarly purposes) well-tempered tuning. It is necessary to point out that "equal temperament," like the theoretical "just intonation," describes an absolute impossible to realize in instrumental practice. Both mean-tone and well-tempered tunings are methods of practical compromise with physical things as they are. These two compromises differ principally in the fact that mean-tone tuning is more accurate in the uninflected scale (without sharps or flats), whereas well-tempered tuning has been made less accurate within the uninflected scale in order that it may be more accurate when used in any harmonic combination. This ambiguity in the physical nature of sound is fully explained by Helmholtz and more briefly by some books on piano tuning.

Sufficient evidence exists to establish the approximate terminal date for general use of the mean-tone tuning as about 1850. The origin of the mean-tone temperament and its system of tuning has been variously ascribed, but the date for the beginning of the use of it is agreed to be about 1550.

Bach's fairly private gesture in writing the Well-Tempered Clavier to show the practical use of the new tuning did not at once convert the entire music profession of Europe. Although the early piano teachers of Beethoven and Chopin used the Well-Tempered Clavier and presumably the well-tempered tuning for their domestic instrument, as today a teacher might advocate the 12-tone technic (which is also an expansion of temperament), we are aware that their experience was by no means common.

During the later half of the eighteenth century successful composing in the extreme keys of the mean-tone temperament, though already outgrown by harmonic theory, was well on the way to establish a new harmonic orthodoxy embracing, by an extension of the coloristic and emotional qualities of the affections, the entire twenty-four keys.*

Tune a keyboard instrument to the mean-tone temperament and play on it compositions by XVII and XVIII composers, until the distinctive quality of each key becomes as natural to the ear as the single quality, the same in every key, to which we are accustomed. Played thus, the harmonic coloration of Byrd, Sweelinck, or Frescobaldi within a pair of key signatures is much greater than when translated to the fixed harmonic determinants of well-tempered tuning. Color and variety increase; the accurate major third smooths the voice-leading in the closer intervals; inner voices are exposed and given registration; the bass is enriched; and striking effects are obtained by slight internal modulations. After such experience one is shocked by the appalling dissonance of the well-tempered major third.

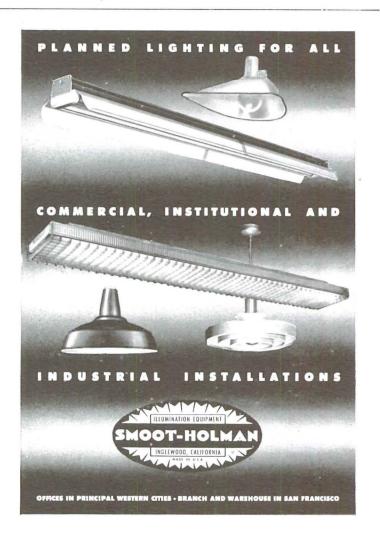
To continue this empirical examination, try the works of Couperin, Purcell, Pachelbel, and the immedate predecessors and contemporaries of Sebastian Bach. Here one will find a much larger variety of key signatures, ranging as far as six sharps in the fourth couplet of the Rondeau L'Epineuse of Couperin's XXVI Order. The consistency of sound and quality within these keys makes clear that the more extreme examples did not require the use of a separately tuned instrument. On the contrary, the listener who has accustomed his ear to mean-tone tuning will find a great charm in the extension of the qualities of the affections to the more extreme keys.

Now the mysterious "Wolf" appears, whose name, uttered without explanations, swiftly closes most talk of this subject. With the extension of tonality to keys using either three flats or three sharps the wolf howl becomes seriously disturbing and interferes with the musical consistency of any piece that has not been carefully laid out to avoid it. The crucial tone is G sharp, A flat, which stands at the extremest distance (minus 27 cents, slightly more than a quarter-tone) from the like tone in well-tempered tuning.

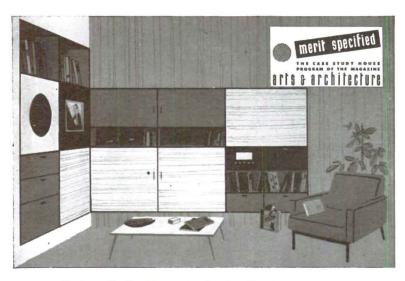
At this point the major composers, judging by their keyboard works, divided in two camps, the affective and the structural. Like present-day neo-classicists who cling with no matter how much added dissonance to their diatonic origins, the affective composers threaded the howling extremes of the mean-tone tonalities in search of patterns that would yield them rich and novel coloration with a minimum of uncontrolled noise. A small anthology of



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^{*}In the highly technical doctrine of the Affections each type of musical figure and each key had its individual significance. We still speak of the tone-coloring and emotional connotation of various keys, regardless of the fact that these qualities had to do with the mean-tone character of the key only and were nearly done away with by the change to the equal harmony and emotional likeness of all well-tempered keys. When I spoke to Arnold Schoenberg of my first experiences in using the mean-tone temperament he recalled how Gustav Mahlr used to say that the loss of this temperament had taken most of the color out of music.



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sonatas and individual movements testifies to their growing independence of "the Wolf." Leaders in this taste were Domenico Scarlatti and his pupil Padre Antonio Soler, C. P. E. Bach, and Joseph Haydn. These radicals of an esthetic of Affective Harmony, an individuality of harmonic relationship in every tone, comparable to twentieth century Impressionism, might have given the world a more colorful, but less practical, circle of the twenty-four keys, if they had not been blocked by the increasing desire for complete freedom of modulation typified by Bach's Well-Tempered Clavier and the rugged independence of Beethoven.

Bach composed the greater part of his keyboard works in a style which might occasionally strain but seldom broke through the limitations of mean-tone harmony. The practical reason for this double style is plain enough. Bach could tune his domestic instruments as he pleased but not the organs, harpsichords, and wind instruments on which his music would be played in public. Nor could he retrain the singers and players, accustomed to mean-tone intervals, who performed his cantatas.

The F sharp Toccata for harpsichord with its extreme modulations in both the Largo and the double fugue indicates the strain imposed by this double attitude towards harmony and sound. This is a work thought out in terms of well-tempered harmony, but every effort has been expended to avoid harmonic combinations that would jar when played on the mean-tone instrument. At the same time the affective quality of the extreme key intensifies the emotional undercurrent of this complex, learned piece.

Bach's keyboard music gains when played with mean-tone tuning but not in the same manner as the sonatas by Domenico Scarlatti or Haydn. The successive movements of suites, partitas, and sonatas in a single tonality take on a more distinctive character. The progression of eighth and sixteenth notes is more even than we are accustomed to hearing; the voice-leading is consistently smoother. The intent of the embellishments, both written and implied, which accentuate dissonance when required or modify it upon occasion, becomes clearer. The whole vibrates with a coordinated feeling that is in the nature of the key, the individual color and emotion that is at the heart of every use of the affection. The barest patterns of Bach, like those of Buxtehude and Pachelbel, take on warmth and softer texture. The great slow movements, the Goldberg Variations, the intimate two-part studies and Duets, lose their squareness and vibrate with an individual resonance in every part like singing voices.

Haydn's mastery of coloring in the more extreme keys endlessly astonishes and delights the player on the mean-tone instrument, while Mozart seems to have thought in terms of unrestricted modulation in the safer keys. Mozart's last piano work, the **Variations** "Ein Weib . . ." (K. 613), cannot be heard in their true dynamic subtlety of internal phrasing except with mean-tone tuning.

The key-signatures using three flats (E flat and C minor) were favorites of all composers during the later mean-tone period. If these composers had not been writing for performance on meantone instruments, they would probably, like Schubert and Chopin, have used the extremer almost as commonly as the simpler signatures. This raises the interesting speculation: at what point did the prevailing taste change from the earlier to the later tuning? For the string instruments and voice this adaptation would not be difficult; for the keyboard instruments and the winds the change is fundamental. It seems unlikely that Mozart's open air music for winds and the great Serenades in E flat and C minor can have been intended for horns and bassoons tuned to the music of the future. The effect of the wolf-tone (A flat, G sharp) gives these flat keys a disturbing brilliance and emotional tension very suitable to the dramatic uses Mozart, as well as Bach and Beethoven, made of them.

Three flats or less often three sharps may be reckoned the farthest

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extreme to which the structural composers usually cared to go in compromising harmonic freedom with mean-tone dissonance. Occasional movements in the extremer keys were inserted as color patches, usually in subordinate parts like the trio of a minuet. Minor variations in the extremer keys provided color contrasts to the prevailing tone of variations works in the accepted signatures. As if to show off both his virtuoso gifts as a composer and the capacity of mean-tone temperament to be used with smooth characteristic modulation through an extreme range of keys, Domenico Scarlatti composed his **Sonata No. 35** (Longo), with signatures using seven flats, six sharps, six flats, three flats, and a section in C major. The initial scale of many of the Scarlatti sonatas serves as a sort of tone-row of the harmony and its affection, setting the esthetic character of the entire piece.

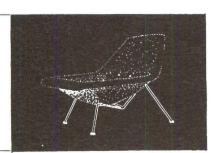
Beethoven retained the mean-tone signatures. His early keyboard works, the Bonn Sonatas in E flat, F, and D, stay well within the mean-tone limitations and make enjoyable use of the affective qualities. The big Variations on Righini's "Vieni amore," with which Beethoven made his debut in Vienna, are as directly for meantone as the later C minor Variations and E flat "Eroica" Variations are not. The early piano sonatas recede from practical mean-tone use so gradually that to one accustomed to the sound only an occasional movement or a modulation goes out of register. This is of course the historical fact. Only very gradually did buyers of the printed music become aware that something drastic was afoot. Like Bach, much of whose Well-Tempered Clavier loses nothing by transfer to mean-tone, Beethoven thought the new harmony at first in reference to the older qualities of the affective sound; and his publishers certainly did not urge him to do otherwise. The change becomes decisive in his keyboard music written during the last five years of the eighteenth century, the same time when Haydn drastically abandoned the affective pleasures of a lifetime to compose his masterpiece of modulation, the last Piano Sonata in E flat.

Schubert deliberately composed in the extreme keys in defiance of his publishers, who returned his **G flat Impromptu** with the request that it should be rewritten in a key which more people might be able to play. Since the difficulty of this piece is certainly not manual, as some writers have assumed, the publishers' objection can only refer to the fact that it was unsuitable to be played on the majority of pianos, which still used the mean-tone tuning. Chopin thought and composed his music for well-tempered tuning. Thus within one generation, for Chopin's early works were written at about the time of Schubert's death, the change of temperament had become widely accepted throughout Europe.

It is strange that lovers of XVI, XVII, and XVIII century music have not long since begun tuning their instruments in the manner for which this music was intended. In my opinion, who have tried them both, the correct tuning is more important than the correct instrument. Careful practice can enable us to reproduce the playing styles of the older instruments; nothing but the correct tuning can provide the natural harmonies. Through the mean-tone temperament one reenters the candle-lit, bright-colored world of Haydn and Scarlatti.

Yet the contrary effect is the more startling. To return to well-tempered harmony after having adjusted one's hearing to meantone is like entering a room brilliant with electric light. The crisp dissonance of the thirds, the chiming of the farther harmonies, the almost shadowless illumination of our modern temperament can only be appreciated by trying it for oneself. But the difference cannot be grasped in a few moments of experiment. Nor can the distinctive qualities of the mean-tone affections become real and musical to the prejudiced modern ear except after many hours of devoted, concentrated playing.

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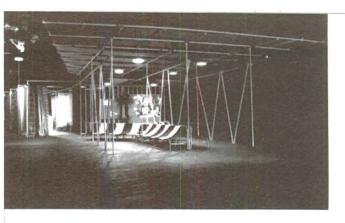
The Director-General of the United Nations Educational, Scientific and Cultural Organization has felt it necessary to resign as a protest against small budget allocations for carrying on this great project, thus bringing to the attention of the civilized world the tragic discrepancies between sums of money available for armaments and politics and the pittances put at the disposal of this international organization which is asked to deal in the essential verities without which mankind can never hope to live in order or within any civilization worth having.

It is amazing that individuals and groups of individuals are not more immediately aware of the international association known as UNESCO and do not recognize it as the most intelligently organized body of human thinking through which the best impulses of mankind's interlocking identities can be expressed. It is such an organization as we have long dreamed of, a focal point where all subject matter having to do with the proper study of man can be concentrated on a productive and objective basis. It is the one place in the world of ideas where aims and objectives are at their most non-political, a truly international oasis of the human intellect where problems subjected to the best techniques of science are tempered to the human scale with great compassion. This forum of informed opinion—technical, philosophical, social, and cultural—is, in the modern world, the only place where the civilized mind in an uninhibited exchange of ideas can hope to find a possible confirmation of any acceptable definition of human dignity.

From this rich beginning an honestly organized correlation of the accomplishments of the human species can, within reason, be made useful and productive and recognizable as the common denominators of the good life. Here, intelligence tempered with working sense can become the vehicle of salvation. Here, man's best thinking, his truest aspirations, his richest hopes are secure in the dignity of his honesty and objectivity and humaneness. That such an effort so widely recognized, so wonderfully conceived, and so richly endowed should suffer the need of money is a commentary on the tragic idiocy of our time.

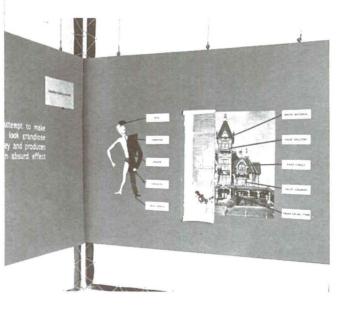
UNESCO is principally interested in overall problems of cross-cultural understanding as it affects the individual's day-by-day life. What the social scientists mean by culture is, in the words of Dr. Telberg "not necessarily the arts of a nation in the sense of painting, sculpture, or poetry, but the totality of the patterns of thinking and acting transmitted through generations from father to son, and absorbed, with deviations and in varying degrees, by all participants in the life of the nation. So deeply rooted is our cultural heritage that we are rarely conscious of it. To us, it is the 'human' way of behaving, 'the natural,' the proper and the expected. Any other behavior we are apt to consider 'difficult,' 'peculiar,' 'unreasonable,' or 'unpredictable.' To social anthropologists, however, each culture has its own inner consistency, its own inherent order, which makes it, in a lesser or greater measure, workable, predictable, and comprehensible."

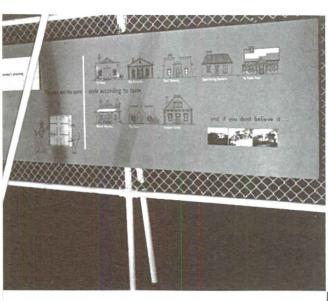
It is from such generalizations that UNESCO develops attitudes and practical approaches to the finite problems that face all of us. The urgency of peace is one of its greatest concerns, though it asks with the rest of us "How can it possibly be that there is talk of war and the threat of war, when all the peoples of the world want peace? This staggering paradox is not simple to resolve. To save succeeding generations from the scourge of war the peoples of the earth entrusted their dream of peace to the United Nations and its related agencies. These agencies by practical daily work are striving to build a more secure society. One of them, UNESCO, especially concerned with eradicating the ignorance, fear, suspicion and hostility which permit and accompany war, is opening the Fifth Session of its General Conference in Florence, Italy, this month. The General Conference has been asked urgently by its Executive Board to consider action designed to enable UNESCO, as an organization of states, to contribute vigorously in the present, as well as in the future, to the United Nations mission of peace."



NOTES ON A MODERN HOME EXHIBITION IN MELBOURNE, AUSTRALIA

HOUSE BY ROBIN BOYD EXHIBITION BY HAUGHTON JAMES





The Exhibition was keyed to the opening statement: "The architect aims to provide —color, sunlight, comfort, shelter, fresh air, privacy, spaciousness, economy, order."

The display was constructed of scaffold pipes painted white and infills of wire mesh, canvas, tape.













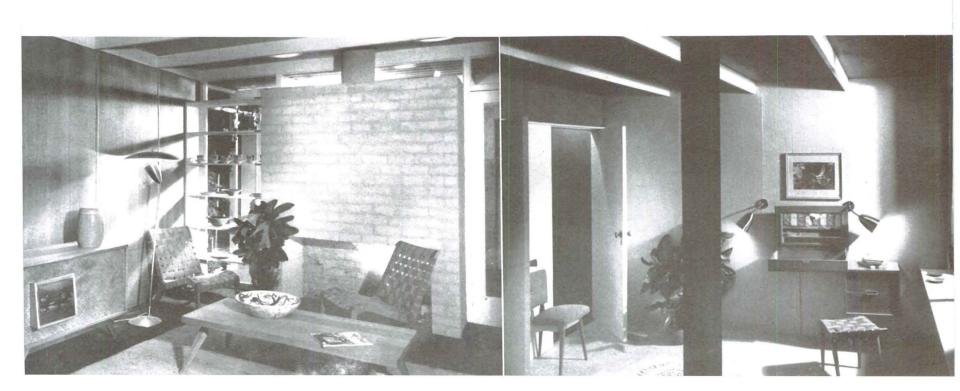
photographs: Wolfgang Sievers

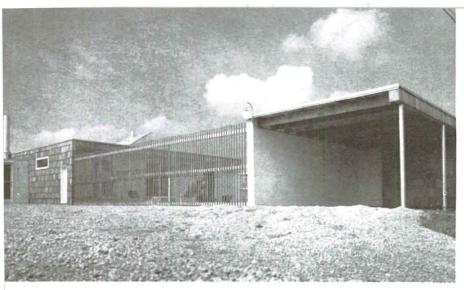
The Modern Home Exhibition was brought together in the Melbourne Exhibition Building where the main display was intended to demonstrate the principles of design through the various stages of home building. There were separate sections on planning, structure, finishes, accessories, etc. One model home was built within the Exhibition, the two-story plan being dictated by the only site available, which was a fairly narrow stage.

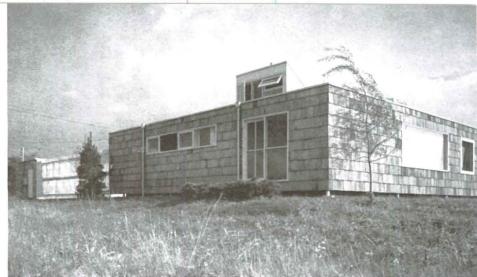
The whole project was brought together in approximately ten days, and with limited funds.

In general, the intention was to lead gently—however, the reactions and the tempers of the invited public were found to be very positive, one-third liking the house, another third violently disliking it, and the last third having no coherent opinion. Interestingly enough, the architectual students condemned it; the psychology students regarded it as highly successful.

All this represents the work and thinking of a small group on the Australian scene, working with limited facilities and against considerable odds, but persistently and intelligently.







WATER TOWER HOUSE

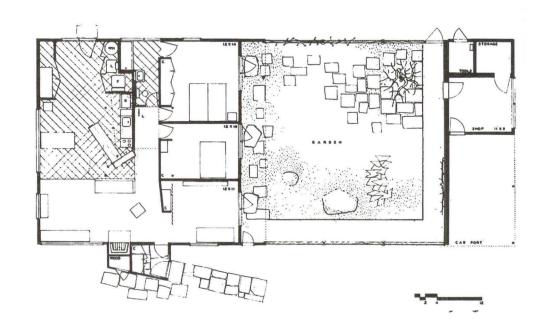
This is the first of a development of four houses to be built on several lots on a high point of land outside Chicago. The house plan is a 36' square adjoining an enclosed garden of the same measurements, with carport, shop, and storage facilities beyond. The total enclosed space measures 82x36.

The skylight gives access to roof, light and air, additional volume where it is most needed, giving a third dimension to the ground plan.

The jacknife kitchen permits an adjustment of the work space and embraces as much of the outer room as necessary to create a maximum kitchen which absorbs the dining and utility areas. When its pivoting work top is in the other extreme or closed position, there is the effect of no kitchen at all.

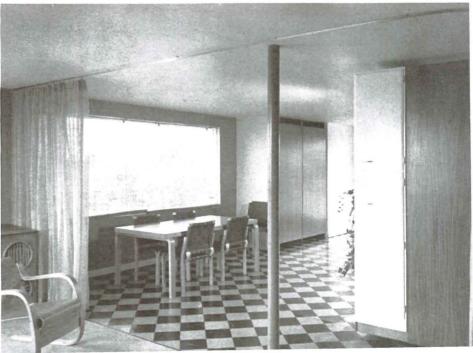
The walls and roof of the house are carried on sixteen lally columns partially concealed within the exterior walls. Columns are welded to 40 foot I-beams.

The crux of the plan is the kitchen arrangement and the bedroom-garden relationship. The latter was a prerequisite; the former evolved from the exigencies and from the desire for changing spaces.



FOUR BUILDING PROJECTS FROM THE RECENT WORK OF





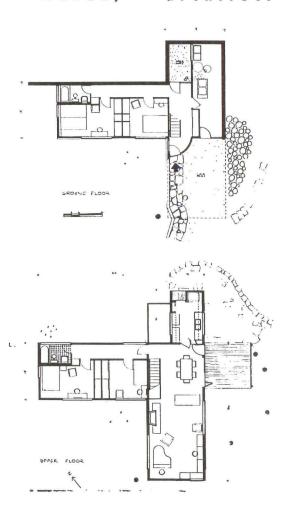
The hillside site has extensive views of lakes southeast and southwest, with exploitation of the views, the slope, and the prevailing southwest breezes. Planning was also influenced by the use of dry materials for interior finish and an attempt was made to keep joints to a minimum by keeping to a 48" module longitudinally and 24" tranversely.

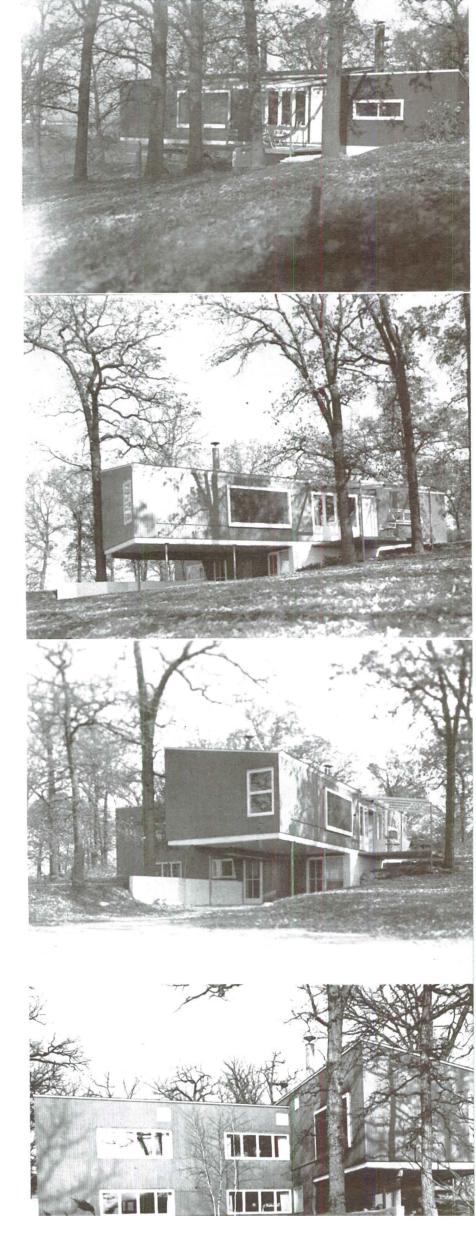
The exterior is painted barn red, which looks well through the seasons. The interior colors are natural finish cherry wood, white ceilings, presswood floors, blues and grays on the walls. The kitchen is yellow with gray lino floor, brown lino work tops and white enamel ceiling.

The fireplace is a standardized metal circulating unit hung on the wall, fitted with a $\frac{1}{4}$ " steel plate bottom and covered with asbestos cement. A 12" metal flue runs directly through the roof. A transite panel is inserted in the floor below the apron. This unit heats both by convection and radiation.

The building is articulated in three parts, each structurally independent, providing a simplified roof system, interior finishing, and also privacy. The ceilings all slope and a ventilating opening is placed at the highest point to remove heated air otherwise trapped in the top of the room. The floors of the lower bedrooms are 3' underground, which proves to be a satisfactory arrangement, though at first some difficulty was experienced with condensation in the humid summertime occurring on the exposed masonry walls and floor. This is now remedied by lining the walls and floors and insulating between.

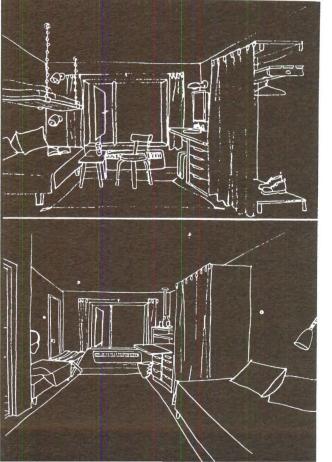
HARRY WEESE, architect

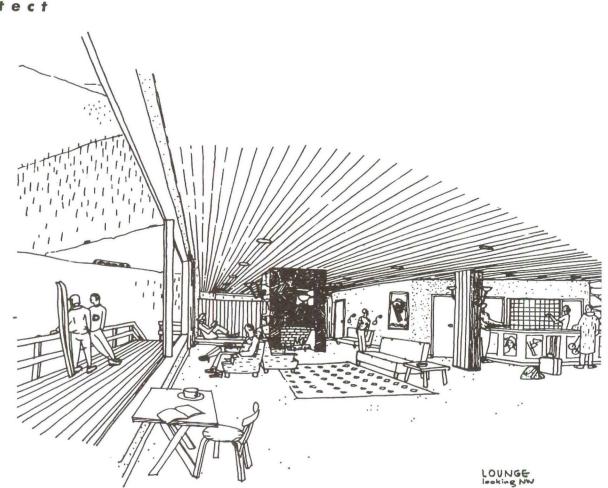






HARRY WEESE, architect





The ski roof vestibule opens out to the southwest slope about 1200' from the lift, and contains racks, waxing tables, and ski shop, as well as fireplace and lounge area.

The main entrance is through a protecting overhang and large vestibule into the lobby and desk area. Beyond the main stair are two lounges with fireplaces. The dining room adjoins the lounge area and opens to a veranda extending across the entire width of the lodge. The kitchen facilities have been planned for the most efficient service both to the dining room and the Rathskeller below.

On the first floor two corridors form a utility core for service rooms, baths, stairs and toilets. This twocorridor system increases privacy and noise insulation. The employes' service stair permits emergency exit, as do the several balconies.

On the second floor the plan is similar, a dormitory being substituted for the state-room type accommodation. The end of one corridor has been widened to form a small upstairs lounge.

The plan has been devised to allow for expanding the lodge at either one or both ends without maladjustment of sizes or relationships.

The construction is semi-fireproof throughout, with structure and finishes chosen for durability and ease of maintenance. The lower two floors are steel and rubble masonry, and it is upon this platform that the upper two floors of rooms are erected. The use of bar joists forms a gallery for free pipe runs.

Heavy accumulations of snow and ice will slide harmlessly from the metal roof on the overhang side. Heavy insulation, thermopane, and hot water heating system make for general economy and comfort. The site plus economy of construction and operation dictated a compact vertical design. Board and batten painted red, combined with stone, result in a sensible as well as an attractive project.

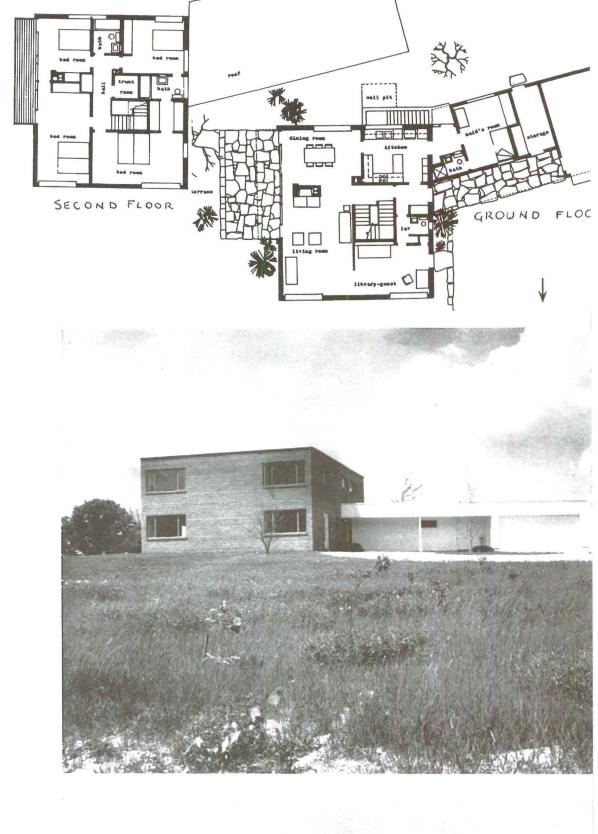
SIGNAL HILL HOUSE ->

This house is on three and a half acres of high ground, part of which is in dense woods—immediately accessible to transportation from a 300-foot access driveway. The house takes full advantage of panoramic views of the rolling hills, river valley, lakes and golf course, yet the site plan was designed to secure permanent privacy.

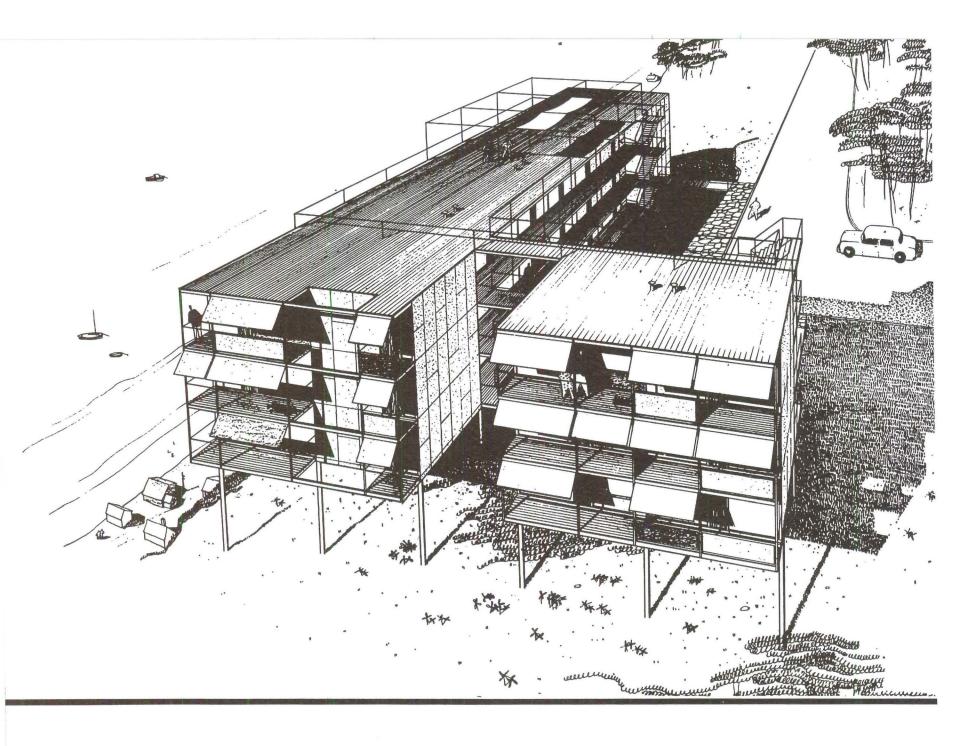
The foundations are of poured concrete—walls of solid masonry and steel frame. The living, dining, and guest room open freely into one another, making a large general space for entertaining. Four bedrooms on the second floor open from a stair hall and command magnificent views.

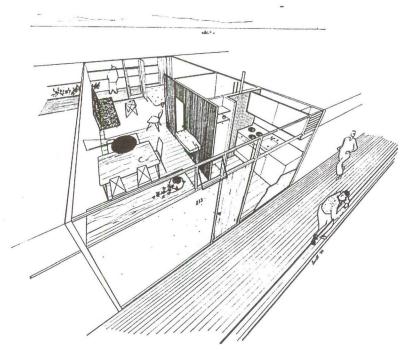
The house has detached servants' quarters, and was designed with low maintenance as a part of the problem. It is oriented for sun, view, prevailing winds, and seclusion from an adjacent highway.

The house is a part of a coordinated development of four modern houses projected for an area outside Chicago.









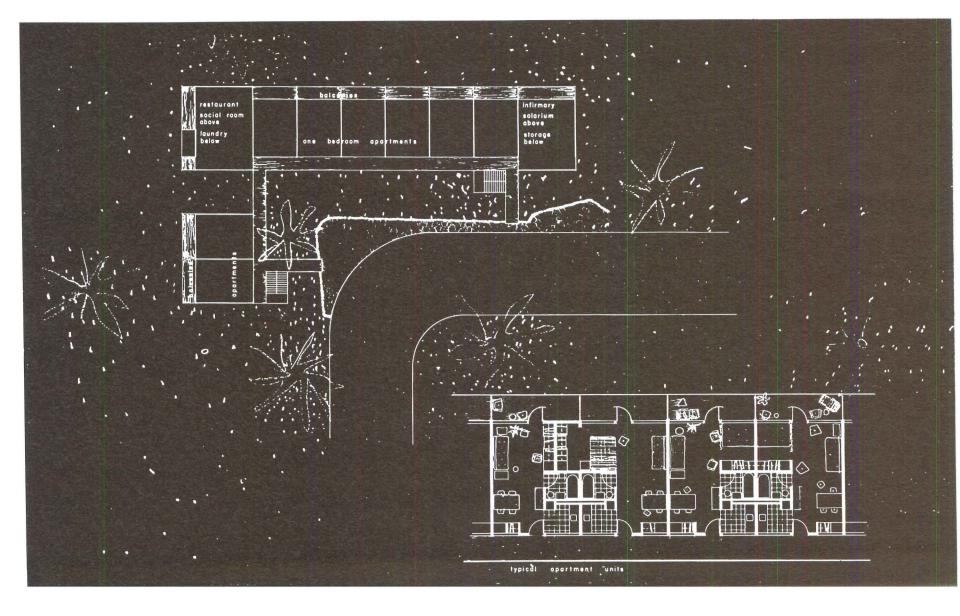
typical apartment

This project was designed to satisfy at low cost the housing needs of the smallest family groups, the portion of our society whose living requirements, in terms of physical space, are the simplest. Young married couples, students, perhaps, families without children, elderly couples whose children have married, and single persons of all ages here find an economical, easy-to-maintain environment for living. More important still is the fact that the living units are sufficiently simple and neutral in concept to allow their occupants full freedom of selfexpression. Apparent space within the units would be increased in its U-shaped flow around the bath compartment from sleeping to living to kitchen and by its limitless extension through glass areas on two sides of the apartment.

In addition to providing individual family accommodations, this building affords social amenities as well. On either end of the main block of apartments there are special group-use rooms: restaurant, social lounge, infirmary, solarium, and laundry room, providing the dwellers with all of their normal living requirements within the building. A portion of the roof is usable as outdoor recreation space.

Low costs are achieved by purchasing steep land which is unusable for normal residential purposes, and building the apartment house on columns. In this way three stories are built, yet by entering on the middle floor no one goes more than one flight of stairs to his apartment. In buildings planned for elderly people, ramps may be provided in place of stairs to accommodate wheel chairs. Outdoor corridors, counterbalanced by open balconies, tend to simplify framing as well as reduce construction and maintenance costs. Cabinet kitchens, conception of plumbing, and efficient space planning make further reductions possible.

LOW COST MULTIPLE DWELLING PROJECT BASSETTI & MORSE, A.I.A., architects; WENDELL LOVETT, associate





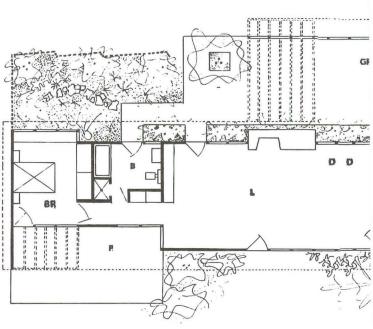






Upper Leff: the front terrace with open rafters over bedroom allowing filtered morning sun. Upper right: large outdoor living and dining terrace—glazed on the mountain side and looking into the intimate bedroom garden. Lower Left: Toward bedroom and bedroom terrace—showing redwood storage wall and glimpse of the bedroom garden. Lower Right: living room at night with draperies drawn.









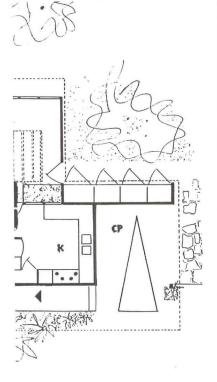
The house is located on a four-acre gently rolling knoll in the Malibu Hills, with unobstructed views of a high range of mountains to the north and an expanse of ocean to the south. The problem was to select the best orientation for the house in regard to the sun, the views, and the prevailing winds, and to provide the best approach from the road below with ample parking space and plenty of outdoor living areas.

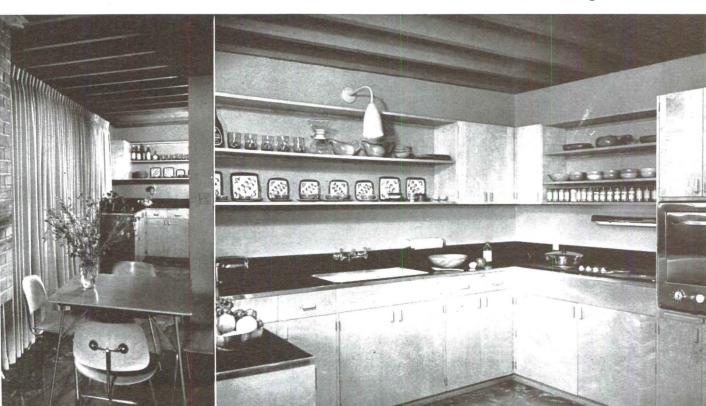
It was the desire of the owners to have an expandable, easy-to-maintain one bedroom house, with a feeling of spaciousness and simplicity, and more than incidentally to achieve a structure which would become a natural part of the landscape and be buildable on a limited budget.

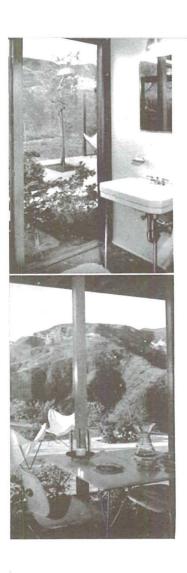
A site was chosen at the crest of the property facing southeast toward the ocean and northwest to the mountains. In taking advantage of the two principal views, the house is long and narrow with extensive floor to ceiling glass areas broken by few supporting walls and the massive form of a raw brick fireplace. At night the glass areas are completely covered with heavy draperies, giving the entire interior a completely closed-in and intimate, warm feeling.

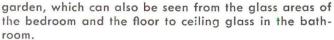
A continuous sloping roof extends over the house and carport, including two outdoor terraces, one on either side with partially open rafters. The bedroom terrace is protected from the prevailing west wind by the extension of the bedroom wall and is partially covered by the seven-foot overhang. The living-dining terrace on the northwest side of the house is entirely glazed where it faces the dramatic mountain view and closed in by a redwood wall on the east. Extensive planting areas have been left in the concrete slab creating a transition from the inside of the house to the garden and on to the mountains beyond. A glass door to the kitchen from this terrace permits an ease of dining and entertaining out of doors. At the west end of the terrace, in order to protect the bedroom from seasonal winds, a redwood stake fence encloses an intimate

HILLTOP HOUSE BY HALINA ROSENTHAL designer







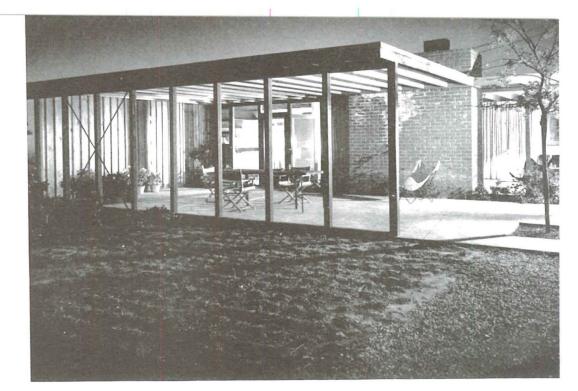


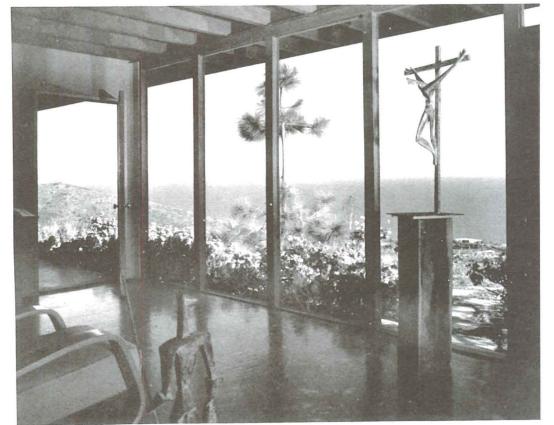
The living room, 16' x 30', has a built-in storage wall of redwood stripping. All the redwood used has been left natural, and the exposed wood ceiling has been stained to match throughout the house. The predominating colors of the house, with the natural redwood, are gray and yellow with a gray asphalt tile floor and natural color homespun draperies. In the kitchen a warm terracotta pink is used as background for the natural birch woodwork and the black counter tops. The large, square kitchen with warm coloring, hardwood cabinets, floor to ceiling glass areas and soft draperies becomes a much lived-in continuation of the livingdining area. A built-in electric oven and range becomes a decorative accent eliminating the look of the laboratory. Electric wall heaters are used throughout the house, supplemented by the large fireplace in the living room.

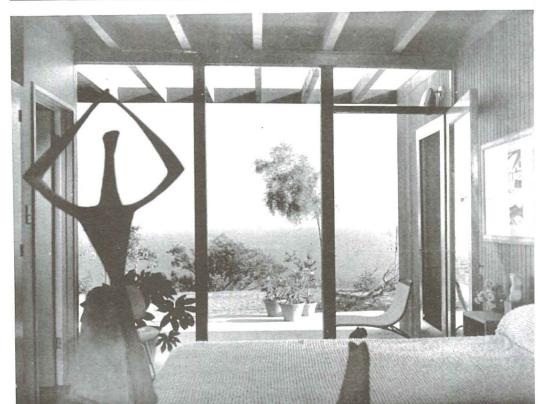
In the future it is planned to build a combination second bedroom and den on the present bedroom terrace, with a new playroom terrace to be added as an extension of it.

The house is redwood board and batten on a concrete foundation slab—a white composition rcof rises gently toward the ocean side—an exposed rafter ceiling with tongue and groove sheeting was used throughout. The building is all dry wall construction, with the exception of the west wall of the bedroom, which is of three-inch redwood tongue and groove extending on to the bedroom terrace.

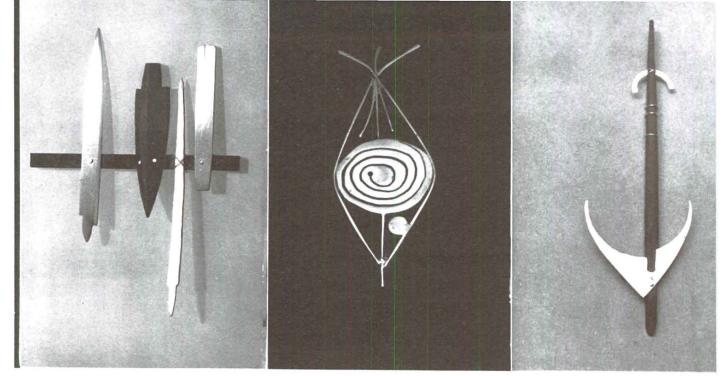
All planting used outside of protective areas was chosen for its hardy character, its ability to withstand climate variations and take care of itself, once established.



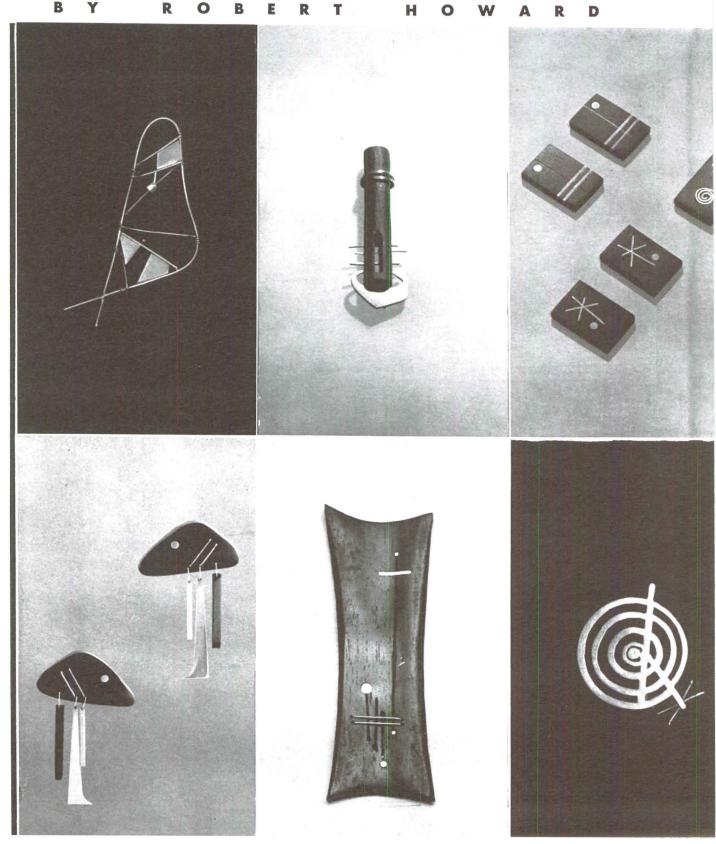


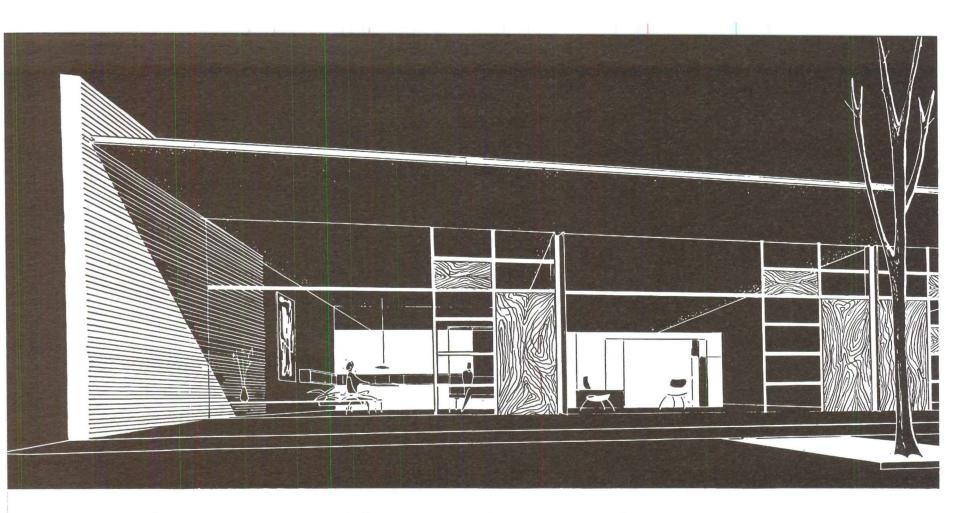


HILLTOP HOUSE: HALINA ROSENTHAL

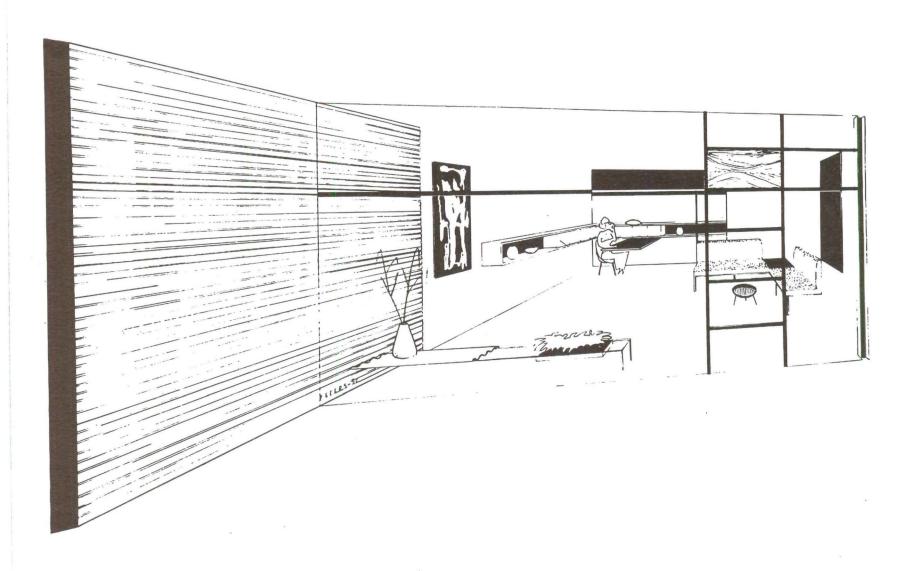


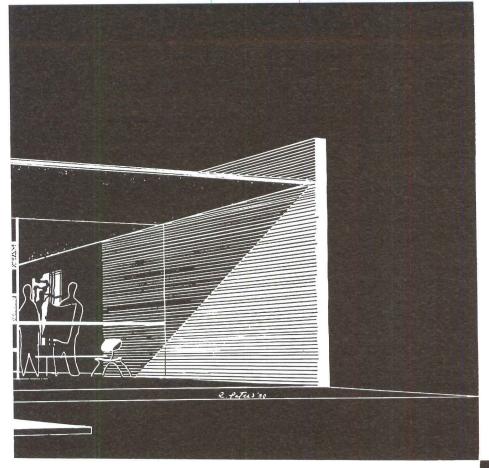
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SMALL OFFICE BUILDING BY CRAIG





ELLWOOD, designed

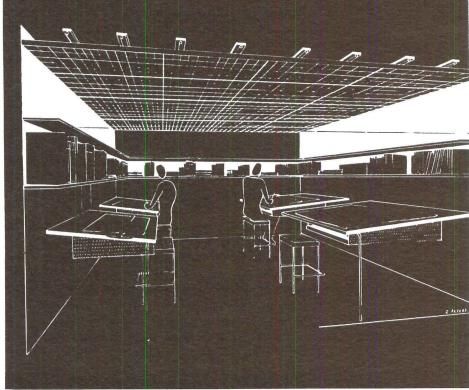
The complete structure is 50' x 69' resulting in 1000 square feet for each of three stores. Those not occupied by the designer will be leased to related professions. The western sun is partially controlled by setting the building 9 feet from the property line and projecting a canopy 8' x 9" from the face of the building. The glazing pattern is repeated on the 9-foot concrete ramp.

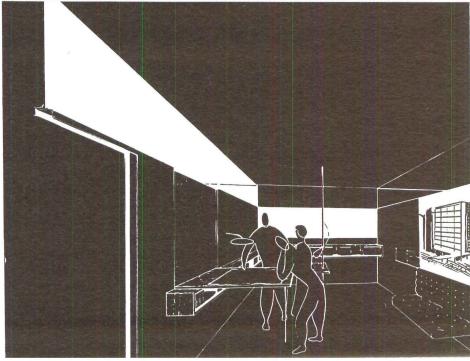
The facade exposes all structural steel. The main interior partitions (walls between stores) frame into 6 inch H columns. The cantilevered canopy joists frame into a continuous 4 inch "WF" (wide flange) beam which serves as facia. All glazing members are 3 inch steel tees. Glass is held in place with small angle clips.

In the designer's office, occupying one of the three divided areas, provision is made for reception, office, drafting, hall storage, and sample material display. Sliding panels from the designer's office open into both the reception room and the drafting room. Flooring is of asphalt tile.

The walls of the reception room will be covered with panels of burlap covered softwood. Color throughout will be in grays, whites and blacks, with accents on the primaries. Masonry is Rocklite's 24 inch veneer unit.

The building was let at a contract price of \$4.00 per square foot, including insulation and sound control between stores.





It is a matter of technology to a much smaller degree than the casual observer would think, but rather one of reconstruction of mental atitudes. As such, it is the best possible example for the fact that design for survival or survival through design is profoundly aided, in fact made possible only by an understanding of mental backgrounds before which are bound to take place, or to fail, the most conspicuous fireworks of modern technology.

While hardly yet subjected to any valid biological tests of many users, there are hundreds of shop-fabricated house building schemes, all technically more promising than the hand-to-mouth methods now current on the building sites. Why do these technical ideas, in the United States, for instance, seem largely to stay in the scheming stage instead of giving us a splendid show of contest in the broad field? Although the grandstands are crowded to the point of collapse, the track is not yet open. Impatient early to bet on one horse or the other, the race is not yet ready to start and entries may still change.

It is of broadly instructive value to illuminate the mental handicaps behind the scenes and the profound problems which environmental design progress encounters here. Housing for the many is, after all, one of the crucial issues of our time. It affects practically everybody.

Prefabrication has been "just around the corner" for twenty years now. What, then, is the reason why it cannot step forward for better or worse and as powerfully as the author, among others, had predicated for a long time? On democratic principles and in a period of knowhow in mass-fabrication, large populations should not be "dwelling starved" and replacement of obsolete, wornout dwellings by up-to-date ones should not be so sluggish. What has nullified all the hopeful prophecies?

First of all, the entire idea of new—not second-hand—housing for millions, all suitably planned at first hand, is without historical precedent. There is no orderly tradition or habit established for rendering this service or for receiving it in the unheard-of quantity required by modern mass populations. The residences we find pictured in the text books of past architectures are largely and prominently the mansions and palaces of a comparatively small group of consumers with large purchasing power; the princes, kings, and popes, the commercial magnates and

ple of France, nay, of all Europe and the whole world. All that seemed required was to break the shackles of feudalism, to alleviate the burden of foolish taxes that prevented progress, to eliminate by persuasion or violence the reactionary interference of a royal and autocratic government. Then, it was thought, something like optimal survival, as physiologists call it, would be at hand for the race.

We know that after one hundred and fifty years, these promises, as far as housing is concerned, are still awaiting their fulfillment. In large areas of the civilized world the "lower" strata of the population (lower with regard to purchasing power), and even a good part of the middle class, went on living through the victorial age and up to the world wars under backward and miserable conditions. In the United States it is less than a generation since professional designers and architects began paying attention to mass housing.

The most recent of wars has destroyed large urban areas in various countries. It would seem that here a fresh opportunity would show itself for rehousing according to new standards and using the means developed in contemporary industry, but hitherto used for other purposes than that of providing comfortable shelter.

However, there have appeared numerous impediments to such a profound and progressive change in the technique of house-building and in the thorough replanning even of war-destroyed cities.

In many cases the destruction was not sufficiently radical, but left enough of the old so-called improvements, so that street layouts, land dedication pattern, and site planning stemming from pre-war days seemed worth preserving. Unfortunately, even the atomic bombs of Hiroshima and Nagasaki had no great depth effect. Old sewers and utility lines were only made leaky, but were not badly enough damaged to be abandoned easily for a new site plan and a fresh, wholesome, overall start. Men were killed, but past ideas and sins, safely buried deep underground, kept on festering and anchoring the status quo. These sewers, water lines, gas lines, even the pavement of streets, have all taken a fantastic value, not intrinsic, but inflated by shortages of materials and labor. The most antiquated and dilapidated fixtures have become prized possessions. Circumstances seem to be in conspiracy against a progress that is long overdue. There has even been legislation (for example, in England) giving preference in government subsidies and loans for reconstruction to people who intend to do no more than again

PREFABRICATION

FROM "SURVIVAL THROUGH DESIGN," A BOOK IN PREPARATION BY THE OXFORD UNIVERSITY PRESS BY

the country squires. Housing for veterans programmed by a Danish king of the Renaissance, by the Signoria of Venice for aged sailors, Prussia for imported Hugenot weavers, are small and paternalistic exceptions.

The French Revolution in the late eighteenth century was, as we have already pointed out, the result of an incipient industrial development which seemed to be gathering the momentum and the machinery for the mass-production of commodities useful to a progressively higher and higher proportion of the population. The bourgeoisie, which was at that time the standard-bearer of the tendencies, predictions and slogans proclaimed by the industrial revolution, gave promise of a broad, new cultural growth and progress, with benefits for the entire urban and rural peo-

make habitable their half-wrecked structures. This may have been unavoidable in the first moment, but a premium is thus put on conservation of antiquated conditions and buildings wherever they can be resurrected from the rubble.

The worst feature of this process is the fixation of the old street layout and site plan, which again emerges from the holocaust like an evil phoenix.

Still, the smaller the new dwellings and their plots may have to be, the more it is imperative that there be thinking in terms of harmonious and contributive surroundings in which livability is not restricted to the floor area of this minimum dwelling itself, but is supplemented by the neighborhood outside of it. In spite of ingrained associations

of "my home, my castle," and even with the very best design a minimum dwelling is not and cannot well be independent and self-sufficient. Isolated by itself, it must remain unconvincing as a message of progress when submerged in an amorphous city stretching on endlessly, uninhibited by sensible articulation or balanced planning and thronging with wilder and wilder traffic. Much of all this surrounding trouble has been brought over us by the habitual dedication and "cut" of land following outmoded patterns of the bigger and better metropolis—an example so eagerly imitated by even the smaller towns of the United States, for example.

In order to succeed the shop-fabricated house, perhaps even more than the conventionally constructed one, depends on new concepts of site and neighborhood planning, on new arrangements of the utility network, on new ideas of how to subdivided and utilize land, and, last but not least, on how to finance the individual home owner within a large-scale balanced project.

In spite of such a formidable array of what to many observers seem technical difficulties, interpreters of the slow progress and the tedious rooting of the shopbuilt dwelling have placed emphasis on the consumer's sentiment. It has often been suggested that it is the consumer who is simply opposed to repetitive design on grounds of tradition.

The opposition is there, but that it is due to tradition we should rather doubt. For wherever tradition is alive, it is a formally standardizing force such as we have hardly seen in operation for a long time, while fashions were wildly changing in Floral Heights, Hollywood, and elsewhere.

Let us, in contrast to these vacillations, once more consider a country like Japan where, after wholesale destruction, four million minimum dwellings are now being programmed. We like to repeat that there buildings and attitudes were until recently governed by a living tradition. But just for this reason we find a degree and a habit of uniform standardization that no American prefabricator would even attempt to impose on his customers. All old Japanese houses, in city or village, thirty or forty million of them, whether they belong to rich or poor, are thoroughly standardized in their structure and in their dimensional elements. All measurements are based on units of three by six feet, the size of the standard floor mat. All rooms, whatever their size, are always laid out in multiples of this standard mat. The walls are made in matsized panels, precisely three feet wide. The looms on

CHARD NEUTRA

which the cloth for wearing apparel is woven are built to this three-foot width, and the clothes fit neatly into standardized panel-width drawers. This basic unit of the mat is so universally established that any Japanese could negotiate orally with his carpenter-housebuilder the size and cost of his project. If they spoke of a fourteen-mat room, they had a clearer idea of how big a room it is than would an average American citizen speaking of 252 square feet. In Japan houses used to be built not by men of a dozen different trades, as they are here with us. The carpenter was the housebuilder; he did every kind of work that has to be done in putting a house together, from laying the roof to glueing the paper into the panels. When we refer to a living tradition of house-building in Japan, we

thereby mean not only that the various features of a house are not subject to individual caprice, but also repeat what was discussed earlier, i.e., the fact that the characteristic of a Japanese house are psychologically associated and sensorily related to most other fields of cultural activity, such as civilized forms of eating, singing, or dancing. Singing and housing, for instance, we have seen are not independent, but interdependent; the Japanese non-resonant singing manner is adapted to houses with padded floors, while it offers miserable acoustics for western musical methods. The very same flooring serves for sitting after the Japanese fashion, but does not go with American furniture and shoes.

Such intimate relationships to modes of living, in the fullest sense of the word, must be emphasized and appreciated if and where they really exist, before one heavily invests in machinery for a new mass supply of a type that possibly interferes with many interlocking standards. But the modern manufacturer or prefabricator in Japan, as elsewhere, will find himself better helped by a painstaking research staff of his own than by the often very inarticulate and vague opinions within a consumership now badly suffering from the collapse of a once firm tradition.

The houses in an old-fashioned Japanese village, as anywhere in native surroundings, used to have a strikingly uniform appearance; all the roofs, for instance, were of the same material and so, of course, had the same pitch suitable for that material to drain the water. One does not find there, as so often in American speculative developments, that every roof is arbitrarily set at a different angle for variety's sake and caters to all kinds of outdated and often imported roofing materials.

It is not tradition, but the breaking down of tradition, that makes possible this—our present stylistic restlessness: Spanish houses may be in vogue one year, French Colonial or modernistic the next. If we assert that our Western way of housing consists in everybody building what he finds pictured in the real estate section of last Sunday's supplement, or what his architect or his contractor can talk him into, then we simply admit that we have no tradition at all. For what is it but the power of a consistent past determining our minds that things shall be thus and not otherwise?

The true sources of the consumer's opposition to repetitive design are entirely different ones.

One such source is an atomized sort of propaganda, powerfully catering to still entrenched modes of building. A car is advertised and sold as one indivisible whole, and advocates of prefabrication have invited us to imagine the nightmarish results most of us would achieve if we were to buy lighting fixtures, fenders and bumpers of many styles, a gear-box here and a carburetor or a rear housing there, and then have our car assembled by a group of contractors in our back yard. Yet, this is precisely what the consumer is urged to do with his houseto pick the kind of roofing he wants and choose the brand of flooring, heating, insulation, and hardware he has been made to believe the Joneses are buying. The rugged individualist in each prospective home owner is flattered into "expressing himself" instead of squarely facing (as he does when he buys a bicycle or an automobile) the technical and economic facts.

The prefabricated house is a complex commodity and has to be planned in advance down to the smallest detail without technical interference from amateurs and lay persons. A manufactured house must be sold to the customer as practically one indisputable whole—just like a car.

To make prefabrication a true success a house must be produced in lots of about ten thousand each. That is to say, it must, in its overall make-up and layout, represent the common denominator of what ten thousand different families, of varying age and composition, living in different neighborhoods and even regions of locally different climatic conditions, need, want, or can be persuaded to accept. By reason of its tooling it cannot be small neighborhood business and survive.

To reconcile ten thousand different and conflicting sets of requirements in one house that can face north, south, east, or west, that will give protection against prevailing winds from any direction, and that will, in addition to or because of this unification, lend itself to economical mass production, is a more intricate matter than designing a small house for one personalized party, however complex its requirements may be. It is not a job that a seventy-five dollar-a-week draftsman can do in a week or two. It is rather an assignment that would take a harmonious group of experts with a staff of thirty assistants about two and a half years—which is longer than the present American backers seem willing to wait. Such men usually expect too great returns too quickly from too small an investment! Obviously, periods of great need for housing will make most painfully evident the fact that old-fashioned means and methods are no longer adequate to the problems and that new ways have their commercial opportunities. But at the same time a shortage on the market is a great temptation to hasty and ill-prepared action. Prefabrication and shop production, however, demand most careful preparation and not a rush job, grabbing for speedy profits, with the sales offices clamoring for stock to sell. Such a condition is bound to damage the mind picture, the prestige of the fabricated dwelling, for the public will soon mentally link and associate it with flimsiness and mere opportunistic output. This again will invite cumbersome legal curbs on speculators who are ready to misuse both the long frustrated inventors, in love with their prefabrication schemes, and credulous consumers, promised today the miracle house of tomorrow.

There is a divergence between minds engaged in ordinary sales effort, on the one hand, and in advanced production engineering ahead of its consumership, on the other. The salesman deals, in general, with people who often at least claim to "know what they want," who may accept some minor novelty, but nothing fundamentally new. He has adjusted himself to this sort of dealing and gives voice to just this sort of experience. Also, the politician and legislator who votes public funds for a subsidy heartily agrees here that "tradition" should be followed so as to please his constituency.

But again we must remember that mass production of housing and especially a fully industrialized brand of it is without historical precedent. Tradition is not applicable and too often conflicts with fundamental technical necessities of a chosen production scheme.

Mass output depends upon wholesale consumption and on long-range prediction and decision about consumer behaviour. A decision concerning design here calls for an equally long-range investment in tooling which is a vast multiple of what was formerly required for conventional construction. The latter had the easy flexibility of a small-scale operation without the pressing economic and technical need for an unmodified repetition many thousands of times.

If we decide to try and fit the design of a shop-fabricated house to antiquated ideas about the sizes and shapes of lots and land, to old notions about site planning or utilities and public services, or to the standards of trade unions which were organized to deal with competition of smallscale piecemeal activities, we always make a dangerous and perhaps deadly decisioin. With it we may doom to failure all our costly preparations and our product itself. On the other hand, to disregard any powerful current conditionings or prejudice is again fraught with peril. Prejudices about living habits and houses are obviously more prevalent and more deeply ingrained than, say, about automobiles from which we drew our enthusiasm for all-shop construction. Yet, even there we know that radical changes in body design have been opposed by distributors and production executives anxiously listening to sales experts. What is true for the motor car holds true also for the bus and the commercial aircraft. One's chances of surviving a plane crash with a belly uncut by the safety belt would be considerably greater if all the seats faced to the rear. Yet, the newest airliners cater to the prejudice of conditioned brains and still face their passengers to the front.

The experience of the author in designing inter-city buses, the Pullmans of the highway, has taught him to understand somewhat the minds of directors, sales managers, and of the operating companies who handle the product in direct contact with the public. It has become his habitual attitude not to minimize the resistance and the obstacles. Prefabrication of homes will, for a considerable period to come, remain beset by many and diverse resistances which can and should all be taken as neuromental in their rooting, and therefore as normal.

In order to better understand them, we shall list the principle resistances, each with a brief characterization:

1. Production Finance

Financiers who back a prefabrication scheme are usually not aware of the length of time required for the preparatory stages before production and profits can begin to flow, and consequently become restive with their anticipatory emotions frustrated too long. The design on paper and tracing linen calls for an immense amount of painstaking detail work. The arrangement of the plant is in itself a complex and critical matter; the position and productivity of each tool has to be planned and balanced against those it is fed by and those it feeds. The flimsy preparation in the preceding individual competitive building era has conditioned the minds of backers in this field. Their financial patience gives out too early, for they do not realize that such minute and careful planning of a two-bedroom house must not only take a great deal of costly staff-time, but is a fundamental requirement for its success.

2. Personnel

There is an almost complete lack of trained personnel in the field here discussed. Production engineers, foreman, and workmen must be taken over from various other activities. They are almost never established in this trade. They are either completely unskilled, in which case it takes a long time to ascertain whether they will turn out to be valuable and acquire useful attitudes, or else they claim to have previous training supposedly related to the work in hand, in which case it is most often found that biases acquired during their former experiences are more harmful than beneficial. Architects, designers, and builders ,for example, are really complete strangers to production in lots of ten thousand, while again persons who have worked on aircraft production bring with them habits of a pampered armament industry where fifty million dol-

lars may be spent before a few new bombers leave the around.

These glorified sheet metal shops and war-fed industry did and could afford to disburse more wages on filing clerks than a metropolitan library can spend on its librarians. Apparently, for every plane some 45,000 detail sheets had to be made available. Such pre-elaboration is splendid practice, but there was a joke current in the industry that when the weight of paper was equal to the weight of the plane, the plane would fly. In housing, the weight of blueprint is unfortunately too small a fraction of the weight of the final product. It is really not surprising that people conditioned to that other atmosphere should not easily be able to adjust themselves to the financial stringencies of a more impecunious industry.

The answer then might seem to be to start with raw personnel and train it from scratch. Though the aircraft companies could in wartime afford to pay unskilled workers while they learned, only to see them perpetually drift off again, this is rather an expensive luxury for an industry whose funds are severly limited. Having so much non-industrial remembrances in its baggage, its moves are often penurious and timid.

3. Labor Organization

The processes used are unfortunately not as new and unrelated to other processes used in manufacturing as are those in utterly unprecedented productions. The manufacture of homes seems less novel than that of atomic bombs. Consequently, attempts are continually being made to look at this work and segregate it according to the principles of out-of-date crafts and trade-union rulings which now no longer apply to the conditions of prefabrication.

Trade unions are most variegated as to the interests and habits of thinking which characterize their members and the personnel of their leadership. The building trade unions were originally formed to protect the interests of the skilled craftsman and were very well suited to dealing with the small employer who in turn very often had risen from the ranks; for instance, a plasterer who had done well and became a subcontractor. Under such circumstances conversation with the boss or with his organization had not to leave familiar ground, and the lines dividing the various crafts could be agreed on fairly well. But negotiating with a large corporation like that devoted to modern automobile manufacture requires an entirely different kind of psychology not commonly practiced in the building field. As it is, much of the negotiator's time is devoted not to securing basic wage contracts and increases of pay or better conditions, as we should expect, but to deciding or disputing which union can claim certain domains or pieces of the work. It means extending the old categories to circumstances which they no longer fit. Men who spend their whole day within the plant driving Ross carriers, lumber spiders, and lift trucks and moving piles of precisely cut wood from one place to another—are they members of a traditional building trade? Usually they are not considered to be part of one of the many categories of truck drivers either. Some are likely to belong to the carpenters' union and receive carpenters' pay, though the skill they require for their job has little to do with hammers and saws. Most of the work in a prefabrication plant would indeed be transferring partly finished pieces from one semi-automatic machine to another—really an internal, under-the-roof traffic problem.

4. The Home Loan Business

Money lending institutions and governmental agencies, which are concerned with giving financial aid to small

home owners or to individuals or groups who want to develop large dwelling projects, have been in the habit of tabulating statistics of the past (how many times, and for how much, has a certain type of house been rented or sold in the past ten years?), and on these statistics they based their prognoses concerning the economic safety of plans submitted to them for approval. The trend of such prognoses has, of course, a considerable influence on the type of house that actually is built. It is rather as though an automobile manufacturer were to station observers at important road intersections with the mission of counting what kind of car passed there most frequently, and, then, according to these ingenious findings, make his new designs resemble that car as closely as possible. If the observer saw more 1939 Chevrolets than any other car, we might then all be driving new 1939 Chevvies in 1950.

Long-term statistics on the sale and resale of prefabricated houses are, of course, not available.

The traditional methods of assuring acceptance and its duration until all costs are amortized evidently apply badly if at all to radically new products, and financing will therefore have to come from other institutional sources. Or at least a new personnel with a different psychological background will have to meet the situation which old "thought tracks" and associations fail to serve.

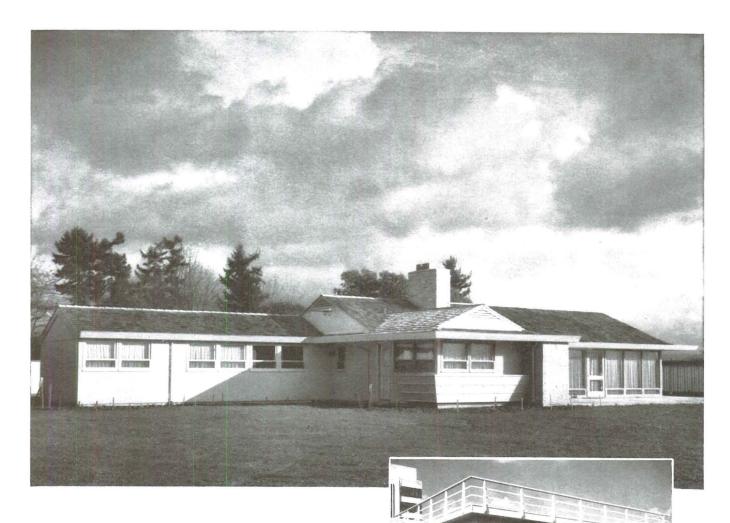
5. Building Ordinance

The building laws, a codified structural tradition, are one more important factor. Their original purpose was to protect the public against current malpractices, against fly-by-night operators liable to disappear after shearing their sheep, against jerry-built houses which, flimsy as they are, would not stand a high wind or the mildest earthquake. These laws or ordinances were adapted to the methods of the past and, as a matter of fact, did protect the public then. However, they cannot now take a running account of our industrialized technological advances, so that in relation to intricately modified and truly contemporary construction they have a perpetual tendency to become inadequate and irrelevant to a considerable extent.

It is impossible to speedily explain all that is necessary to the staffs of building departments, who have not hither-to had any need for such abstruse technical knowledge. To short-cut reasoning it may appear puzzling why this or that novel method used in complicated mass fabrication is not only adequate and safe but may actually be superior to the antiquated mode of doing things now in use and assiduously controlled by the regulations. How to explain, for instance, the chemistry and physics of modern glue-joints electronically integrated, which are stronger than the materials themselves to be joined and immeasurably superior to the most ingenious arrangement of nails?

It is obvious that shop fabrication, taking advantage of ever new inventions which make possible amazing savings through engineering and requiring an enormous investment in machine tools, calls for a continuous, continuous, consistent production over decades. It requires a very different spirit in the application and interpretation of safety criteria. The responsible firm of financially secured duration will have to give guarantees for the performance of their products for which mere police power can hardly substitute.

As they stand up to the present, our building laws often serve to "protect" the public against progress of a type they were not and in fact could not have been conceived to anticipate. Changes in (continued on page 44)



Yesterday—<u>and</u>—Today Preferred For Prefabrication!

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GUNNISON HOMES, INC. New Albany, Indiana

NATIONAL HOMES CORPORATION Lafayette, Indiana

CRAWFORD CORPORATION
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> PAGE & HILL HOMES, INC. Shakopee, Minnesota

> > GREEN LUMBER CO. Laurel, Mississippi

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CY WILLIAMS FABRICATORS Huntington Station, N.Y.

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Prefabrication—the often praised, often maligned, always spectacular offspring of the multi-branched building industry—had clearly reached adolescence in 1941. During the war, the factory-built-house industry grew to a lusty young manhood and today stands as one of the greatest potential forces facing all businesses engaged in building material manufacture and design, construction, sale and financing of homes.

Defined by the National Bureau of Standards as a structure having walls, partitions, floors, ceilings and/or roof composed of sections or panels which have been factory-fabricated prior to site erection, prefabricated homes are clearly a product of the same type of thinking which brought about the great industrial revolution. The birth of the basic prefabrication system used today was in 1935 when the Forest Products Laboratory built its first demonstration house, using plywood panels glued to a skeleton frame, thereby initiating a relationship between plywood and prefabrication which have since made the two terms practically synonymous.

Simultaneously with the development of the plywood house, the Forest Products Laboratory had been carrying on an intensive research program on stressed cover panels to determine strength properties for the most economical design. As a result of this continuing program, and about two years later, the research group built a more modern and completely prefabricated plywood house which after well over a decade of close inspection by many thousands of people, is still in excellent condition.

The extent to which the big, rigid, easy-to-use plywood panels are today used in the prefabrication industry is indicated by the fact that more than half of the 60-odd firms engaged in prefabrication use plywood as the basic material in their construction systems. Gunnison Homes, Inc. and National Homes Corporation, for example, two of the largest prefabricators, each use more than 4,000 square feet of Douglas fir plywood in their small two-bedroom models; Gunnison's current monthly production of this particular model is 44; National Homes, 48.

Plywood's preference among prefabricators, according to Prefabricated Home Manufacturers' Institute manager Harry Steidle's terse explanation "is based on the panels' unique physical properties: great strength, impact resistance and ease of handling."

Plywood's large size and easy workability combine to speed factory operations and assure precision work. Further, plywood's rigidity, strength and impact resistance not only permits many construction economies and adds "plus" strength to the framework of the house, but is also important when wall sections are built in shops, transported by trucks and erected at the site.

The prefabricators, who expect to manufacture more than 50,000 units this year as compared with 35,000 in 1949 list many advantages of their systems over conventionally built houses: 1) Systematized factory built methods make possible savings of up to 20% and assure structural soundness and precision workmanship; 2) unforeseen expenses are eliminated permitting the buyer to pay definite set price; and 3) the buyer knows exactly what he is getting—and gets it months sooner. The great majority of prefab systems used today are adaptations of the principles developed in the early Forest Products Laboratory plywood houses in which the panels were used for walls, floors and ceilings. The two basic prefabrication-with-plywood systems involve either "stressed skin" or "panelized (non-stressed skin) construction." In the stressed skin system, plywood is glued to the wall framework to become part of the house frame. Non-stressed skin panelized construction means the plywood is nailed to the framing to give the wall extra rigidity and strength. Between the two lies the "semi-stress" design, used by several companies in which the plywood is partially glued on the inside and nailed to the outside.

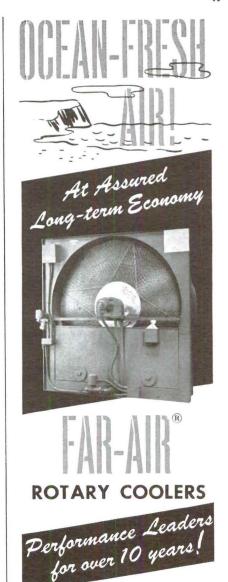
Historically, the early studies of the Forest Products Laboratory furnished the technical assurance needed to establish the "stressed skin" plywood panels as the most efficient, most promising of all building materials. As a result, plywood was quickly adopted by leading prefabricators as their basic material.

The early entry of plywood in the prefabrication field brought with it another material strange to most builders—glue—which is used not only between the plys which make up the panels but is also used for permanently bonding plywood to framing members. When plywood is glued to the wall framework, the covering becomes a part of the house frame to bear part of the structural load. According to Forest Products Laboratory tests, $\frac{1}{4}$ " plywood glued to the frame of a house, with openings for windows and door, is almost four times as rigid, has almost four times the relative strength of 1" x 8" diagonal sheathing nailed to the same frame.

Stressed skin construction with plywood has since brought about entirely new standards for stud sizes and spacing. While custom had dictated that wall framework be of 2x4 studs placed the classic 14" on centers—and this same concept carried over for years as a prerequisite for acceptance of pre-built structures by building authorities, today recognition of lighter framing members in assembled house sections is growing materially.

In this direction, the biggest single step was the acceptance of the prefabricated structures on performance rather than specification by the Uniform Building Code shortly after the war. This code, adopted by more than 500 cities, opened the way for 1x3 and 2x3 framework when used in conjunction with plywood stress covers which, even with the reduced bulk of framing members, still provided far more strength and rigidity than conventionally-built walls.

Further tests showing the structural adequacy of plywood glued to smaller framing members published in Bureau of Standards Report BMS No. 104, shows 1" x 3" stress covered panels with 3%" plywood on one side and 14" on the other carried 283 and 302 pounds per square foot over a 7½' span as compared with 273 and 266 pound per square foot for standard wall construction employing 2" x 4" studs. (continued on next page)



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As a general rule, prefabricated house manufacturers using plywood as the basic building material use $\frac{\infty}{2}$ -thick Exterior type Douglas fir plywood as outer wall covering. The versatility of Exterior plywood as a siding material permits design variations which are used in conventional construction as well as prefabrication. Cut in half or thirds, the durable panels can be used as attractive, extra wide lapped siding. Standard $\frac{4}{2} \times \frac{8}{2} \times \frac{1}{2} \times$

A relatively new development in prefabrication with plywood involves using plastic faced plywood as exterior siding. Permanently fused to Exterior type Douglas fir plywood with completely waterproof bond, the plastic faces present a smooth, tough surface which can be left "as is" without further finishing or provide an excellent paint base.

Prefabricators using non-plastic faced Exterior Douglas fir plywood siding have found the best painting system for plywood siding or any other plywood exposed to weather is the same as for ordinary wood siding. The high grade exterior house paints of either TLA (titanium-lead-zinc) formulations or straight white lead and oil have been found to give the best service. In the three-coat system, the initial or prime coat is a high grade exterior primer thinned with at least one pint of pure linseed oil per gallon of paint applied with a brush.

Another satisfactory prime coat is obtained with a high grade exterior aluminum house paint or an aluminum primer compounded from 1% to 2 pounds aluminum paste or powder in one gallon of long oil spar varnish, mixed just prior to application to obtain optimum leafing characteristics. Steps two and three of this system are a second and third coat applied according to the paint manufacturers directions.

In the two-coat system for finishing Exterior plywood a high grade exterior primer thinned with at least one pint of pure linseed oil per gallon of paint is applied with a brush, followed by a second coat applied according to manufacturers' directions. In using the two-coat system, however, prefabricators have found the same dry film thickness as the three-coat system is necessary to obtain comparable weatherability. Textured or stucco-type finishes are also used on Exterior plywood siding by many prefabricators. Synthetic resin or oil-base paints containing mineral particles, asbestos fibre, etc., as part of the pigment are generally used for this type finish.

When shingles or other material is used for exterior wall covering over plywood sheathing, the latter is generally 5/16" PlyScord—the special unsanded sheathing grade within Interior type Douglas fir plywood. Most wall sections are 4x8—the same size as the commonest size plywood panel.

Interior wall paneling of Douglas fir plywood is usually %'' or %'' PlyPanel. PlyPanel is the paneling grade of Interior plywood with one side suitable for finishing while, for economy, the other side contains certain wood characteristics which do not affect panel serviceability.

In addition to plywood's strength, impact resistance and contribution to overall superior construction, the wide range of finishing effects of Interior plywood paneling has made it popular with home buyers and quite naturally with the prefabricators who are ever anxious to cater to consumer preference. Plywood's warm, interesting grain pattern affords the pleasant beauty which can be obtained only with real wood. Interior plywood paneling used in factory built homes can be given virtually any finish; it can be painted, enameled, papered or stained.

For interior wall paneling, however, the cheerful, new light stain finishes have proven one of the greatest sales-features of plywood homes. Housewives with an eye toward interior decoration are particularly impressed with the light stain finish which mellows the grain contrast, yet preserves the natural beauty of plywood's real wood grain.

Any variation in color is possible, ranging from strong, vivid blues and greens to the soft, subtle pastel shades. The basic four-step system used by many prefabricators to obtain the popular light stain finish is as follows:

1) A coat of interior white undercoat thinned one part undercout to one part turpentine or thinner. Before the coat becomes tacky, it is wiped with a cloth to the desired grain show-through, and sanded when dry. 2) One coat of thinned white shellac or clear resin sealer is applied and sanded when dry. 3) The color coat may be a tinted interior undercoat, enamel or color in oil. It is applied thinly and wiped or dry-brushed to desired color or shade and lightly sanded when dry. 4) The wearing surface is generally one coat or flat varnish, buffed with 3/0 steel wool when dry.

"Stressed-cover" panels for floors are also used by many prefabricators and in this application, Exterior type plywood is frequently used unless the panels are to be over a dry basement. The bottom panels of floor sections are usually covered with $\frac{1}{4}$ " or $\frac{5}{16}$ " plywood while the upper surface thickness depends on type of finish floor to be applied.

Use of "stressed cover" panels permit use of smaller size joists than does conventional construction. One system currently being considered employs thick plywood panels which extend over a 3' or 4' span and use moderate size girders to support the panels without using any joists at all in the floor system.

Plywood ceiling panels are used by many prefabricators either glued or nailed. Plywood thicknesses for these units are usually ¼" or ¾". Most leading prefabricators also prefer plywood roof sheathing. Several manufacturers have always used ½" PlyScord to provide for all conditions although ¾" and even 5/16" PlyScord have been used with success. Finish roofing is generally asphalt or wood shingled. Where flat or shed roofs are used, roofing is generally built up over a plywood panel.

Individual members of the now large prefabrication industry are continuing to add refinements and improvements to their products. Better financing, new designs, building code revisions, improved factory efficiency combined with new delivery and erection techniques are adding to the stability of the nation's factory-built home manufacturing industry. The final fate of any product is, of course, decided by the ultimate consumer. But on this score, too, prefabrication's future seems

bright: Mr. and Mrs. American Home Buyer like prefabrication on the simple premise that it gives them a better home in less time and for less money.

The Prefabricated Home Manufacturers' Institute, with headquarters in Washington, D. C., headed by Harry H. Steidle, manager, is the policy making body of the prefabrication industry in the United States and Canada. This organization, formed while the industry was in its infancy, has succeeded in providing a marked measure of stability in an industry which very well could be both inconsistent and immature. Nearly all of the major prefabricators in the country are among its members, including the following:

Precision-Panel Homes, Inc., Stockton, Calif.; Knox Corporation, Thomson, Ga.; W. G. Best Factory-Built Homes, Inc., Peoria, Ill.; GBH-Way Homes, Inc., Walnut, Ill.; Quality Homes, Inc., Joliet, Ill.; General Industries, Inc., Fort Wayne, Ind.; Gunnison Homes, Inc., New Albany, Ind.; National Homes Corporation, Lafayette, Ind.; Crawford Corporation, Baton Rouge, La.; Maryland Modern Housing Corporation, Baltimore, Md.; E. F. Hodgson Company, Inc., Boston, Mass.; Nichols & Cox Lumber Company, Grand Rapids, Mich.; Page & Hill Homes, Inc., Shakopee, Minn.; Green Lumber Company, Laurel, Miss.; American Houses, Inc., New York, N. Y.; Ivon R. Ford, Inc., McDonough, N. Y.; Johnson Quality Homes, Inc., Brooklyn, N. Y.

Cy Williams Fabricators, Huntington Station, L. I., N. Y.; Charlotte Lumber & Manufacturing Company, Charlotte, North Carolina; Pease Woodwork Company, Cincinnati, O.; Thyer Manufacturing Company, Tulsa, Okla.; Houston Ready-Cut House Company, Houston, Texas; Capital Prefabricators, Inc., Tyler, Texas; Harnischfeger Corporation, Fort Washington, Wis.; Midwest Housing Corporation, Janesville, Wis.; United Structures, Inc., Peshtigo, Wis.; Canadian Prefabrication, Inc., Gifford, Quebec; Engineered Buildings, Calgary, Alberta; Halliday Company, Ltd., Burlington, Ontario; Lindal Manufactured Buildings, Toronto, Ontario, and North American Buildings, Ltd., Winnipeg, Manitoba.

Prefabricated homes played an important part in the record-breaking volume of housing construction during 1949, according to J. R. Price, president of the Prefabricated Home Manufacturers' Institute. The industry enjoyed a highly successful year, producing about 35,000 single family homes with an estimated value of \$280,000,000—roughly 7 per cent of the approximately four billion dollar output of new houses. The most surprising feature of the year was the unprecedented rise in demand for prefabricated homes during the last three months, normally a quiet period. This momentum has carried over into 1950. Prefabricated home shipments during the first quarter of 1950 showed an increase of more than 200 per cent over those for the corresponding period of last year. Continuation of this trend should make it easy for the industry to reach its goal of 50,000 homes this year.

From all indications, this recent upsurge is not a temporary spurt, but the start of a long period of substantial growth—growth based on several very sound factors. First and foremost is the ever wider acceptance by the general public, particularly families in the middle and lower income groups, of the prefabricated home as the logical answer to their problem of obtaining a quality home at a price within their means.

A good example of a PHMI member at work is Gunnison Homes, Inc., U. S. Steel's home-manufacturing subsidiary. The photographs shown illustrate "shop work" incident to the manufacture of Gunnison prefabricated houses. These photographs show prefabrication at its best level. Although few other prefabricators are able to maintain so large an operation, many prefabricators in varying degrees operate on the basis of similar efficiencies. Gunnison Homes believes it has originated one of the most logical solutions to the nation's housing shortage in the introduction of its new low-cost dwellings—its Champion series.

The Gunnison Homes Deluxe Series consists of eight sizes of homes, ranging from a 24 ft. \times 40 ft., 3-bedroom, 1 bath, home to a 24 ft. \times 60 ft. home having four bedrooms, a dressing room, 3 baths and a dining alcove. These homes may be constructed to have basements and forced air heating, although they may also be constructed to have no basement.

The Gunnison Homes Master Series comes in three sizes, ranging from a 24 ft. x 28 ft., two-bedroom, 1 bath, home to a 24 ft. x 36 ft., 3-bedroom, 1 bath, home. These homes may be constructed to have full basements and forced air heating, although they may be constructed to have no basements.

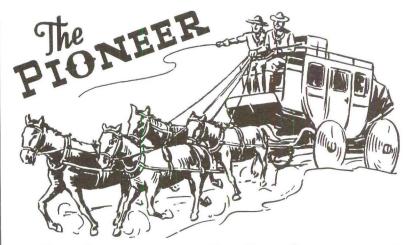
The Deluxe and Master homes may vary considerably because they may be modified by wings, arcades, garages and fireplaces. Variance in appearance may also be had by the use of differently colored roofing, shutters, window boxes and different architectural treatment.

Gunnison Homes is in large scale production on all of the above homes. Production is at the rate of several hundred homes a month, and it is anticipated that several thousand homes will be shipped this year.

All Gunnison homes are of panelized construction, being erected by assembly of wall panels which are approximately 4 ft. x 8 ft., ceiling panels which are approximately 4 ft. x 12 ft., and roof panels which are approximately 4 ft. x 14 ft. The Deluxe and Master homes also have factory-built floor panels which are approximately 4 ft. x 12 ft. The panels are bolted together to form a strong structure.

In these new homes, the company offers four and five-room homes to meet the individual housing requirements of families earning approximately \$50. or more weekly. This being the case, the Champion series is designed to minimize the housing outlay of any family under whatever financing arrangements that may be consumated, according to Gen. John J. O'Brien, president of the company. Usually no down-payment is required from veterans who are able to qualify for GI loans. The Champion No. 1 was introduced by the steel corporation subsidiary last September 8. General O'Brien characterized public reception to the No. 1 low-cost home as "amazing." It provides an overall dimension of 24 ft. x 28 ft. with two bedrooms and bath. The No. 1 is selling for a national average of \$6300, including the lot.

The Champion No. 2 also is a two-bedroom dwelling of larger dimensions (24 ft. x 32 ft.), while the No. 3 provides a home of 24 ft. x 36 ft. overall, with three bedrooms, bath, kitchen and combination living-dining room. Each of the Champions also includes a utility room accommodating an automatic gas or oil forced-air



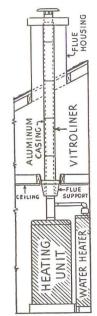
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Variance in appearance in the Champion homes is provided by a wide variety of exteriors and by different colored roofing, exterior paint and architectural details. "Gunnison Homes is in large scale production on all of the Champion models," General O'Brien added, "as well as continuing to offer the higher-priced Master and DeLuxe series homes. At present, production is at the rate of several hundred homes monthly, and with the early completion of additional facilities we anticipate a sharp increase in shipments."

All of the Gunnison Homes models are distributed through enfranchised dealers who erect, sell and service the homes. There are dealers in more than 250 cities and towns in the nation, as far west as Denver, Colo. Among more distant communities to which the Champion homes have been shipped from the Gunnison Homes plant in New Albany, Ind., are Denver, Omaha, Neb., Baltimore, Md., Washington, D.C., Princeton, N.J., New Haven, Conn., Bellows Falls, Ver., St. Petersburg, Fla., and New Orleans, La.

As in the Gunnison Master and DeLuxe series, the Champion homes represent an assembly of four-foot wide plywood panels. Construction of the exterior wall panels, packed with insulation, follows the stressed-skin principle of airplanes wherein the stressed-skin of the wings and body provide the strength rather than the framework. General O'Brien said the wind-resistance of Champion panels is greater by actual tests than that of conventionally-built construction. Parquet-type hardwood and asphalt tile flooring are available.

PREFABRICATION

continued from page 37

"philosophy" and attitude above all, additions in specifically advanced personnel will be needed to check and reinforce ordinances which must be rejuvenated. Perhaps the urgency and magnitude of the task of reconstruction and rehousing in Europe and Asia will inspire local inventiveness, which is rich in some of the countries concerned. In some cases there is a tendency to combine with American capital and industrial organization and, above all, with the American tools and materials they lack at the moment, so as to produce a successful shop practice for the prefabrication of dwellings near the areas which have the most immediate need for them. Undoubtedly such practice and design will be most successful when it is not entirely divorced geographically and thus psychologically from the "market," that is, from the people who will use and inhabit the houses. Neighborliness of production and consumption will help to avoid the neuromental frictions of "misunderstanding" or lack of infeeling.

Necessity has long been recognized as an effective educator and conditioner. Yet, it may be observed in some of the war-torn countries that the shock treatment of disaster has not erased or modified patterns of associations and their emotionally colored cargo of heavy inertia, which must be respected as characteristically hu-

man. Nevertheless, our technology is advancing with a momentum which psychological maladjustment cannot forever hold in check. Social mores not only give birth to technical tools; they have also again and again conformed to and been moulded by them. Prefabrication seems inevitable, however much its path may be beset with delays.

Its own humanization and a service to life by new means is thinkable. Certainly, the technical, the structural, difficulties are comparatively minor. All the important obstructing forces are ideas patterns in the minds of men, mostly of quite normal human beings with a normal human psychology. The better we understand such blockages, the better are our chances of overcoming them.

Nevertheless, the odds for acceptance of advanced industrial technology in this

Nevertheless, the odds for acceptance of advanced industrial technology in this field are not yet clear in many points. It may be that not enough mind resiliency or potential capacity of "adhesion" to something new is left in the fatigued survivors of the last holocaust. Their hopes can possibly not yet form a full bond with such new promises as shop-built housing fitted to carefully accomplished novel and integrated neighborhoods.

Even if it should take another generation of minds to rise so radically from the rubble, the development seems in principle predestined.

CURRENTLY AVAILABLE PRODUCT LITERATURE AND INFORMATION

Editor's Note: This is a classified review of currently available manufacturers' literature and product information. To obtain a copy of any piece of literature or information regarding any product, list the number which precedes it on the coupon which appears below, giving your name, address, and occupation. Return the coupon to Arts & Architecture and your requests will be filled as rapidly as possible. Items preceded by a dot (•) indicate products which have been merit specified in the Case Study House Program. Please do not request literature unless a capital letter indicating your occupation follows the item—following are the letters indicating occupations:

SPOKANE . TULSA and other principal cities

A—Architects D—Designers

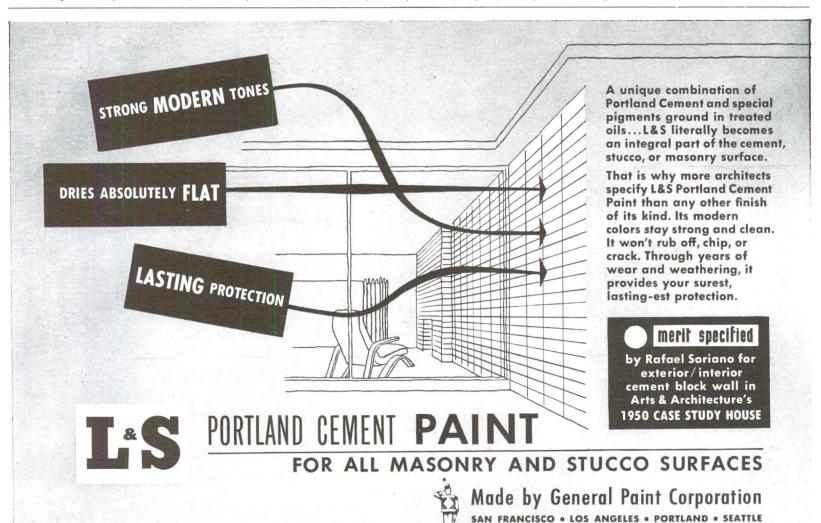
DR—Draftsmen B—Builders

DS—Department Stores

APPLIANCES

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odors; outside wall, inside wall, "ceil-n-wall" installations; completely automatic, easy to install, clean; Fasco Turbo-Radial impeller; well engineered, well designed.—Fasco Industries, Inc., Rochester 2, N. Y. A, D, B.



• (979) Cabinet Sinks: Folder, data sheets Morton cabinet sinks; one-piece top die-formed metal finished with acid-resisting porcelain enamel; 42" to 66" widths, double or single sinks, drainboards, chrome fittings; cabinets heavy gauge furniture steel bonderized and enameled; exceptionally well designed, engineered, fabricated; merit specified CS-House 1950.—Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

• (426) Clocks: Information contemporary clocks by leading designers, including George Nelson; probably best solution to contemporary clock design.

—Howard Miller Clock Company, Zeeland, Mich. A, D, DR, B, ID, AS, C. (11a) Combination Refrigerator-Stove: Full General Chef combination stoverefrigerator and General refrigerators; combination includes four burner range, gas or electric, oven and referigerator in 4.1 square feet; refrigerator has 4 cubic foot capacity; 39" high, 27½" wide, 23" deep including handle; good for small space, worth investigating.—General Air Conditioning Corporation, 4542 East Dunham Street, Los Angeles 23, Calif. A, D, B.

• (980) Electric Range: Folder, data sheets Kelvinator Automatic Cook Electric Ranges; 3-way automatic control for oven, Scotch Kettle, appliance outlet; finger-tip control all cooking operations, 7-heat surface units which tilt up for easy cleaning; "up-down" unit for Scotch Kettle or surface use; two-unit oven; grouped controls easy to read; recessed light for panel, work surface; will cook entire meal automatically; merit specified for CSHouses 1949 and 1950.—Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

• (981) Electric Water Heater: Folder new Kelvinator Electric Water Heaters, round and table-top models; heavy gauge enameling steel tanks lined with two coats of porcelain; hydrostatically prestretched at high pressure before porcelaining; adjustable automatic thermostats; complete engineering, specification data; good contemporary design; merit specified CSHouse 1950. —Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

• (982) Garbage Disposer: Folder Morton Electro-Drain automatic sanitary garbage disposer; 3-way control serves as operating switch, stopper for drain outlet, safety top for shredding compartment; shredder has full meal capacity and works forward or reverse; no vibration; easily installed, easily operated, safe clean, odorless; well engineered; merit specified for CSHouse 1950.—Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

• (983) Home Freezer: Folders, data sheets Kelvinator home freezers; all walls, fast-freezing bottom refrigerated; chest-type design; when lid is opened cold air does not spill out, warm air can't get in; special fast-freezing section; spring-action lid support; lock-type lid lift, handy storage baskets, easy-adjustment temperature control, dependable power unit; merit specified CSHouses 1949 and 1950.—Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

• (956) Indoor Incinerator: Information Incinor unit for convenient disposal combustible refuse, wrappings, papers, garbage, trash; gas fired, unit is 35" high, 22" in diameter, weighs 130 pounds, has capacity of two bushels; heavy steel plate combustion

chamber; AGC approved; excellent product, merit specified CSHouse 1950.

—Incinor Division, Bowser, Inc., Cairo, Ill. A, D, B.

• (365) Kitchen Appliances: Brochures, folders complete line Sunbeam Mixmasters, Wafflemasters, Ironmasters, Toastei, Shavemasters; recent changes in design well illustrated.—Sunbeam Corporation, Roosevelt Road and Central Avenue. Chicago 50, Ill. A, D, DR, B, PB, ID, AS, C.

(10a) Kitchen Ventilating Fan: Information data Marco Filter Fan for houses, apartments; trap, eliminate greasy vapors, smoke, cooking odors; utilizes principles, equipment used in commercial, railroad dining car instal-

lations; life-time washable filter, efficient centrifugal blower; all-metal, removable filter unit cleaned in hot, soapy water; low cost, quiet, heavy duty self air-cooled motor; easily installed; good product, merits careful study.—
Marvin Manufacturing Company, 3071
East Twelfth Street, Los Angeles 23, Calif.

• (984) Refrigerator: Folders, data sheets Kelvinator Moist-Master Refrigerators in corporating near-zero freezing area, moist cold area for usual daily foods, supermoist cold cold-mist zone for foods having high moisture content; two sets refrigerating coils, one surrounding freezing compartment, the other attached to back wall of freezing compartment; well designed,



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engineered; merit specified CSHouses 1949 and 1950.—Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

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(929) Architectural Porcelain Veneer: Brochure, well illustrated, detailed, on architectural porcelain veneer; glasshard surface impervious to weather; permanent, color fast, easy to handle, install; lends well to all design shapes; inexpensive; probably best source of information on new, sound product .-Architectural Division, Porcelain Ena-mel Publicity Bureau, P. O. Box 186 East Pasadena Station, Pasadena 8, Calif. A, D, DR, B, PB, AS, C.

BARBECUE EQUIPMENT

• (977) Electric Barbecue Spit: Folder Rotir electric barbecue spit with seven 28" stainless steel Kabob skew-ers which revolve simultaneously over charcoal fire; has drawer action so unit slides in and out for easy handling; heavy angle-iron, gear head motor, gears run in oil; other models available; full information barbecue equip-ment, including prints on how to build in kitchen or den; one of best sources information; merit specified CSHouse 1950.—The Rotir Company, 8668 Otis Street, South Gate, Calif.

CABINETS, COUNTER TOPS

• (904) Beautylux: Folder Beautylux valance lighting unit for use in kitchens; floods entire kitchen with reflected fluorescent light; brilliantly downlights work area; unifies cabinets, conceals curtain pocket; integral, synchronous electric clock; complete one-package unit; well designed.—Beautylux, 4202 Crestwood Road, Richmond 27, Va. A, D, DR, B.

(731) Cabinet Tops: Booklet requirements for building sink cabinet tops, table tops, other horizontal surfaces using Formica; covers tools, equipment, gluing, pressing, edging, finishing.— The Formica Company, Cincinnati 32,

• (481) Hardwood kitchen Cabinets: Full details well designed Porta-Bilt Hardwood Kitchen Cabinets; same pre-cision construction as steel cabinets with all advantages of wood; continuous counter sink tops, rotating corner cabinet, recessed sink front; any color; comes ready to install; a remarkably good product meriting close study.—
Mutschler Brothers Company, Nappanee, Ind. A, D, DR, B, DB, C.

• (921) Magnetic Latch: Folder ingenious magnetic cabinet latch using attraction of permanent horseshoe magnet to special steel plate; noiseless, simple, practical; particulary good in holding warped, sagging doors; this item is new and well worth investiga-tion.—Laboratory Equipment Corpora-tion, St. Joseph, Mich. A, D, DR, B, PB, AS, ID, C.

• (958) Plastic Drainboards, Counters: Information Formacove drainboards, counters; top and backsplash formed into continuous cover one-piece unit; uniform ¾" concave radius through patented heat, pressure; Formica, Far-lite, etc., bonded to ¾" plywood with solid wood filler strip in cove; outside radius, other decorative postformings on special request; good answer to difficult problem; merit specified CSHouse 1950.—Blue Qx Industries, Post Office Box 1064, Redwood City, Calif. A, D, B.

(985) Steel Kitchen Cabinets: Folder, data sheets Morton Pantryettes, Base Cabinets; available in separate units, Pantryettes hang like pictures, cabinets move like furniture; Pantryettes have sliding glass doors; base cabinets have recessed knee, toe room; all units heavy-gauge furniture steel bonderized and enameled like refrigerators; best contemporary design, clean, sensible; merit specified for CSHouse 1950.— Nash-Kelvinator Corporation, 1620 East Seventh Street, Los Angeles 21, Calif.

DECORATIVE ACCESSORIES

(959) Cypress Knees: Information decorative Cypress Knees from Florida Cypress swamps; come in either abstract natural shapes or made up as figurines, paperweights, background for flower arrangements, wall vases, table vases, lamps, bookends, natural bowls, candle holders, and other items; waxed, polished; interesting, worth investigation.-Thomas Gaskins, Palmdale, Fla. A, D, B, ID.

DRAFTING SUPPLIES

(960) Duplicators: Literature on photocopy duplicators; produces photo-exact copies of written, typed, printed, drawn, photographic material; simple operation, no technical skill, no dark room product meriting study. — General Photo Products Company, 15 Summit Avenue, Chatham, N. J. A, D, B, AS,

ELECTRICAL EQUIPMENT

Ceiling Ventilating Fan: Brochure Blo-Fan electric ceiling-type residential ventilating fan; removes cooking odors, steam; nine-position switch; some models combined with recessed lights.—Pryne & Company, Inc., 140 North Towne Avenue, Pomona, Calif. A, D, DR, B, PB, AS, C.

• (152) Door Chimes: Color folder Nu-Tone door chimes; wide range styles, including clock chimes.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio. A, D, DR, B, AS, ID,

(402)Electric Planning: electricity in house plans; check lists, suggestions for all types of rooms, typical floor plans, wiring data available only in Northern California.—Northern California Electrical Bureau, 1355 Mar-ket Street, San Francisco, Calif. A, D, DR, B, PB, ID, AS, C.

• (922) Safety Electric Receptacles: Literature No-Shok Safety Duplex Electric Receptacles; built-in rotary cap automatically closes outlet when not in use; protects children, reduces fire hazmerit specified for use in all Case Study Houses.—Bell Electric Company, 1844 West Twenty-first Street, Chicago 8, Ill. A, D, DR, B, PB, ID, AS, C.

• (827) Ventilating Fans: Folder and catalog NuTone ventilating fans; models for wall and ceiling installation.— NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio. A, D, DR, B, AS, ID, PB, C.

FABRICS

(986) Artists Concepts: Exceptionally well prepared and illustrated 24-page brochure showing work of Estelle and Erwine Laverne, Alvine Lustig, Ray Komai, Zahara Schatz, Juliet and Gyorgy Keppes, and Alexander Calder in



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fabrics and wall papers, and of William Katavolos, Douglas Kelley and Ross Littell in furniture design and ceramics; artists' concepts uninhibited by "what the public will buy" approach; this brochure belongs in all files.—Laverne Originals, 225 Fifth Avenue, New York 10, N. Y. A, D, DR, ID, AS.

(955) Contemporary Fabrics: Information one of best lines contemporary fabrics, including hand prints and correlated solids for immediate delivery; Textura by Testa, consisting of small scale patterns creating textures rather than designs; reasonably priced; definitely deserves close appraisal.—Angelo Testa & Company, 49 East Ontario Street, Chicago 11, Ill. A, D, ID.

• (987) Reed Fabric Drapes: Information Sun Reed fabric drapes, shades; imported from Southwest Germany, made from selected hearts of Black Forest fir; loomed from slender reeds 36" to 136" long into rolls of same width and up to 120" feet long with 11 reeds to the inch; reeds straight, uniform, without nodes or breaks; stitched solid in 1" or 2" widths at top with recurring stitches ¾" across width of material; can be cut at any point without additional bindings; hangs in graceful fold; merit specified for CSHouse 1950.—Decorium, Inc., 420 Market Street, San Francisco, Calif. A, D, ID.

(988) Silks: Information Scalamandre silk fabrics; wide range patterns, designs, colors; one of best sources of information.—Scalamandre Silks, Inc., 598 Madison Avenue, New York, N.Y.

FLOOR COVERINGS

(803) Carpets, Textiles: Information complete line contemporary, traditional floor coverings; wide variety colors, pat-

terns.—D. & W. Frazier. Inc., 2020 West Eighth. A, D, DR, B, PB, ID (in Southern California only).

(989) Custom Rugs: Illustrated brochure custom-made one-of-a-kind rugs and carpets; hand-made to special order to match wallpaper, draperies, upholstery, accessories; seamless carpets in any width, length, texture, pattern, color; inexpensive, fast service; good service, well worth investigation.—Rugcrofters, Inc., 143 Madison Avenue, New York 16, N. Y.

(12a) On-Grade Sealer: Information Stafco On-Grade Sealer concrete slab treatment; permits safe application of rubber, cork, linoleum tile or rubberbacked carpet on on-grade concrete; seals out moisture, alkali; finished floors will not come loose or buckle; useful product, well worth investigating.—Standard Floor Company, 141 Gulf Building, Pittsburgh 19, Pa.

• (7a) Rubberized Waffled Rug Cushion: Brochure, folders Allen Rubber-Loc Rubberized Waffled Rug Cushion for all types of contract installations; pure rubber, durable fibers; non-slip, provides comfortable walking, preserves rugs, carpets.—Allen Industries, Inc., Leland and G. T. R. R., Detroit 7, Mich.

• (961) Rug Cushion: Leaflet on Spongex sponge rubber rug cushion; greatly increases carpet life, provides luxurious comfort underfoot, creates no dust or lint, easily vacuumed or damp-wiped, has no dirt catching crevices, moth and vermin-proof, never mats down, made of natural rubber, long lasting.— The Sponge Rubber Products Company, 335 Derby Place, Shelton, Conn. A, D, B, ID, C.

• (309) Rugs: Catalog, brochures probably best known line contemporary rugs, carpets; wide range colors, fabrics, patterns; features plain colors. —Klearflax Linen Looms, Inc., Sixtythird Street at Grand Avenue, Duluth, Minn. A, D, DR, B, PB, ID, AS, C.

(13a) Vinyl Carpeting: Information Vinatred Vinyl Carpeting with embossed surface, fabric backed; 9 decorator colors and smart designs; nonporous, cleanable, sanitary, wear resistance, skid-resistance, resilience; particularly good for store use; highly recommended.—Southbridge Plastics, Inc., 470 Fourth Avenue, New York 16, N. Y. A, D, ID, B.

• (990) Vinyl-Cork Tile: Brochure with color chart on Dodge Vinyl-Cork Tile; combines advantages of cork with toughness of vinyl surface; bright, permanent colors, including several remarkably good plain colors; resilient, quiet, safe to walk on, long wearing; good insulating, sound deadening qualities; resistant to fire; requires no waxing; cleans with soap and water; inks, grease, acid, mild alkalis do not mar; merit specified for CSHouse 1950.

—Dodge Cork Company, Inc., Lancaster, Pa. A, D, ID, B, DS, FS, AS, C.

FURNITURE

• (923) Contemporary Furnture: Brochure, folders remarkably well designed line commercial contemporary furniture; features strong construction; clean, simple lines; selected pieces merit specified for CSHouse 1950.—Sterling Furniture. Inc., 1611 West Cortland Street, Chicago 22, Illinois. A, B, PB, D, DR, ID, AS, C.

• (804) Contemporary Furniture: Cata-

log for the trade on contemporary furniture for residential, commercial use. —J. G. Furniture Company, Inc., 102 Kane Street, Brooklyn 2, New York. A, D, DR, B, PB, ID, AS, C.

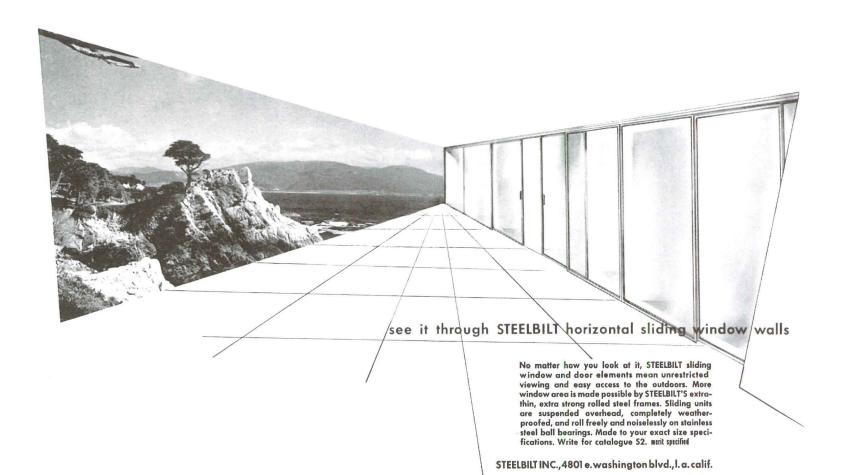
(949) Contemporary Tables: Information contemporary tables designed by Joseph Carreiro; won honorable mention 1949 Furniture Design Competition of AID; clean, well fabricated, worth close investigation.—Pine & Baker, 28 Otis Street, Cambridge 41, Mass. A, D, B, ID.

(975) Furniture in Kit Form: Information well designed contemporary string, tape chairs in unfinished knocked-down kits ready for assembly; also tables; available by mail order at very reasonable prices; also prefinished at slightly higher prices; well worth investigation.—Calfab Furniture Company, Post Office Box 215, San Gabriel, Calif. A, D, DR, B, PB, ID, AS,

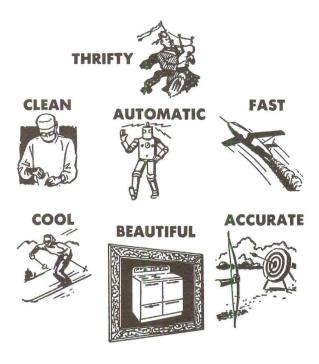
• (316) Furniture: Information top lines contemporary furniture designed by Eames, Naguchi, Nelson.—Herman Miller Furniture Company, Zeeland, Mich.

562) Furniture, Retail: Information good source best lines contemporary furniture; designs by Eames, Saarinen, Martine, others; full interior design service; also fabrics, accessories.—Armin Richter, 7661 Girard Avenue, La Jolla, Calif. A, D, DR, B, PB, ID, C.

• (314) Furniture, Retail: Information top retail source best lines contemporary lamps, accessories, fabrics; designs by Eames, Aalto, Rhode, Naguchi. Nelson; complete decorative service.—Frank Brothers, 2400 American Avenue, Long Beach, Calif. A, D, DR, B, PB, ID, AS, C.



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- (584) Furniture, Retail: Information good source contemporary furniture, retail and trade; designs by Rison, Functional, Eames, Knoll, Nelson, Sebring, Glenn, Dunbar; also Versen. Nessen lamps: specializes on service to architects, decorators.—Carroll Sagar & Associates, 7418 Beverly Boulevard, Los Angeles 36, Calif. A, D, DR, B, ID.
- (954) Indoor-Outdoor Contemporary: Complete catalog new line Van Keppel-Green indoor-outdoor contemporary chairs, tables, chaise lounges; cord, rattan, redwood and glass framed in charcoal-black steel; crisp, fresh, simple design team; this is must information for all files.—Balboa Pacific Corporation, Fullerton, Calif. A, D, DR, B, PB, AS, ID. C.
- (14a) Kingsize Beds: Folder "How to Buy a Bed" featuring custom kingsize beds; mattresses, box springs Hollywood beds; innerspring construction; any width, length, shape; old established manufacturer.—Hollywood Bedding Manufacturing Company, 8418 Santa Monica Boulevard, Los Angeles, Calif. A, D, ID.
- (6a) Modern Office Furniture: Information one of West's most complete lines office, reception room furniture; modern desks, chairs, tables, divans, matching accessories in woods, metals; wide range competitive prices on commercial, custom pieces; professional, trade discounts.—United Desk Company, Twelfth and Olive Streets, Los Angeles, Calif. A, D, ID.
- (991) Painted Aluminum Furniture: Information painted aluminum furniture featuring interchangeable combinations made up of upholstered chairs, ottomans, sofas, corner and end tables; fitted to conform to architecture of any room; diagrams illustrating flexibility available.—The D. R. Bradley Company, 22 East Forty-ninth Street, New York 17, N. Y.
- (962) Prize-Winning Contemporary: Full information case goods designed by Robin Day and Clive Latimer which won first prize in the Museum of Modern Art International Competition for Low-Cost Furniture Design; standard adaptation by Edmond J. Spence, Inc.; fresh, clean, well engineered; merit specified for CSHouse 1950.—Johnson-Carper Furniture Company, Inc., Roanoke 6, Va.
- (15a) Swedish Modern: Information clean, well designed line of Swedish modern furniture; one of best sources. —Swedish Modern, Inc., 675 Fifth Avenue, New York 22, N. Y. A, ID, B.
- (992) Wrought Iron Furniture: Complete color catalog showing settings Woodard Upholstered wrought iron furniture; clean designs, well made; chairs, tables, lounges; Parkerized to prevent rust; one of best lines, well worth consideration; wholesale showroom open to trade, corner Beverly and Robertson Boulevards, Los Angeles.—Lee L. Woodard Sons, Owosso, Mich. A, D, ID, DS, FS, C.

GARAGE VENTILATION

(993) Garage Ventilation Equipment: Literature, full information National Garage ventilation equipment; four types of systems, completely packaged for installation; approved by health departments, insurance companies, building codes; product of world's largest manufacturers, one of best sources of information; belongs in all files.—National System of Garage Ventilation, 318 North Church Street, Decatur, Ill. A, D, DR, B, PB, AS.

HARDWARE

- (16a) Contemporary Locksets: Full color contemporary Kwikset pin-tumbler, cylindrical locksets; clean design, simple operation, precision engineered, rugged construction; unique cam action locking device provides positive knob locking; half-round spindle reduces number working parts; hand-finished in satin, polished chrome, brass, satin bronze; merit specified for CS-House 1950.—Kwikset Locks, Inc., Anaheim, Calif. A, D, B, ID, AS, C, PB.
- (963) New Furniture Hinge: Information Tulson Lazy Tong Hinge; versatile addition to basic furniture hardware permitting new designs; eliminates unsightly gap; no rubbing joints; square joining of horizontal surface and hinged leaf; good product, worth investigating.—Tulson Distributing Company, 1905 Logan Avenue, San Diego 13, Calif. A, D, B.

HEATING & AIR CONDITIONING

- (798). Boilers, Burners: Brochure. information six sizes vertical tube-type boilers, compact interchangeable oil, gas burners; full specifications; detailed, well illustrated descriptions.—The Aldrich Company, 125 Williams Street. Wyoming, Ill. A, D, DR, B, PB, AS, C.
- (542) Furnaces: Brochures, folders, data Payne forced air heating units. including Panelair Forced Air Wall heater, occupying floor area of only 29—3/8"x93/8"; latter draws air from ceiling, discharges near floor to one or more rooms; two speed fan.—Affiliated Gas Equipment, Inc., 801 Royal Oaks Avenue, Monrovia, Calif. A, D, DR, B, PR C
- (994) Heating Facts: Remarkably well prepared 20-page question-and-answer brochure "How to Select Your Heating Systems" featuring Lennox heating equipment, now available; practical, readable information by world's largest manufacturers; should be in all files.—Dept. AA-5, The Lennox Furnace Company, 974 South Fair Oaks Avenue, Pasadena, Calif. A, D, DR, B, PB.
- (907) Quick Heating: Comprehensive 12-page catalog featuring Markel Heetaire electrical space heeters; wall-attachable, wall-recessed, portable; photographs, technical data, non-technical installation data; good buyer's guide.—Markel Electrical Products, Inc., Buffalo 3, N. Y. A, D, DR, B, PB, C.
- (381) Radiant Heating: Firm will engineer and install systems in Los Angeles area; one of the best sources of practical information on radiant



heating.-Horace F. Allison, 8346 W. Third St., Los Angeles 36, Calif. A, D, DR, B, PB, C (in Los Angeles area only).

(331) Radiant Panel Heating: Bro-chure containing non-technical discusradiant panel heating down-toauthorities.—Revere Copper & Brass, Inc., 230 Park Avenue, New York 17, N. Y. A, D, DR, B, PB, AS, C.

(316) Rotary Cooler: Brochures, folders Far-Air rotary evaporative coolers; good design, quality construction, easy installation, low maintenance; 2,500 to 6,000 CFM, automatic controls optional; full specification, installation data, including piping, wiring diagrams in old or new construction.—Farr Company, Los Angeles, Calif. A, D, DR, B. (17a) Unit Ventilation for Schools:

Data describing 37 points of engineering and functional superiority Herman Nelson system of Unit Ventilation for schools; assures uniform temperatures for classrooms; introduces outside air, recirculates room air automatically; operation is economical, dependable; trouble-free, quiet; this information definitely belongs in all architectural files.—Herman Nelson Division, American Air Filter Company, Inc., Moline, Ill. A, D, B.

INDOOR PLANTING

(900) Indoor Plants: Brochure "Foliage Plants for All Occasions"; well illustrated; professional discounts to architects, designers, decorators; nation's largest wholesale growers of decorative plants.—Roy F. Wilcox & Company, Box 240, Montebello, Calif. A, D, ID.

INSULATION AND ROOFING

• (995) Aluma-Life Roofing: Folders, specification data light-weight Aluma-Life roofing; uses aluminum foil, 99.4 per cent pure, between cotton gum base layers with a coating of marble or granite chips of selected colors; rated "A" by National Board of Fire Underwriters, approved by FHA; hurricane specifications; insulation value equals 2" of mineral wool; particularly good for modern design; merit specified for use on CSHouse 1950.—Aluminum Building Products, Inc., Route 1, Atlantic Boulevard, Jacksonville 7, Fla. A, D, D, B, AS, PB. specification data light-weight Aluma

(795) Kimsul Insulation: Technical booklet (AIA-37B) properties Kimsul insulation; consist of plies of creped asphalt-treated cellulose fibers with creped "pyrogard" cover held together with rows strong stitching in blanket; full details thermal, acoustical installa-



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tions.—Kimsul Division, Kimberly-Clark Corporation, Neenah, Wis. A, D, DR, B.

• (95) Roof Specifications: Informa-tion packed 120-page manual built-up roof specifications featuring P-F builtup roofs; answers any reasonable roofing problem with granhs. sketches. technical data.—Pioneer-Flintkote Company, 5500 South Alameda Street, Los Angeles, Calif. A, D, DR, B, PB, AS,

LIGHTING EQUIPMENT

• (734) Architectural Lighting: Booklet Gotham Contemporary Architec-tural Lighting featuring pendant, re-cessed light-troughs; illustrates flat, curved, diffusing, louvered lenses; residential, commercial styles; specifica-tions.—Gotham Lighting Corporation, 548 West Twenty-second Street, New York 11, N. Y. A, D, DR, B, PB, ID,

• (909) Architectural Lighting: Exceptionally well prepared 36-page catalogue architectural lighting by Century for stores, display rooms, show windows, stores, display rooms, show windows, restaurants, museums, churches, auditoriums, fairs, exhibits, hotels, niøht clubs, terminals; features optical units, downlites, decorative units, reflector units, fluorescent units, spots, floods, strips, special signs, color medio dimensional strips, special signs, color media, dim-mers, lamps, controls; full data, includcentury Lighting, Inc., 419 West Fifty, fifth Street, New York 19, New York A, D, DR, B, PB, ID, AS, C.

(964) Bank, Office Lighting: Brochure planned lighting for banks, office; covers recent advances use standard lighting equipment for architectural, illuminating results and influences properly maintained foot-candle levels to improve efficiency, increase working ac-curacy, add visual comfort; data costs, installation, maintenance; well illustrated; one of best sources information on subject.—Pittsburgh Reflector Company, 452 Oliver Building, Pittsburgh 22, Pa. A, D, B, DR, AS.

• (965) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, down-lights incorporating Corning wide angle Pyrex lenses; recessed, semi-recessed, surface-mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination; selected units merit specified for CSHouse 1950.

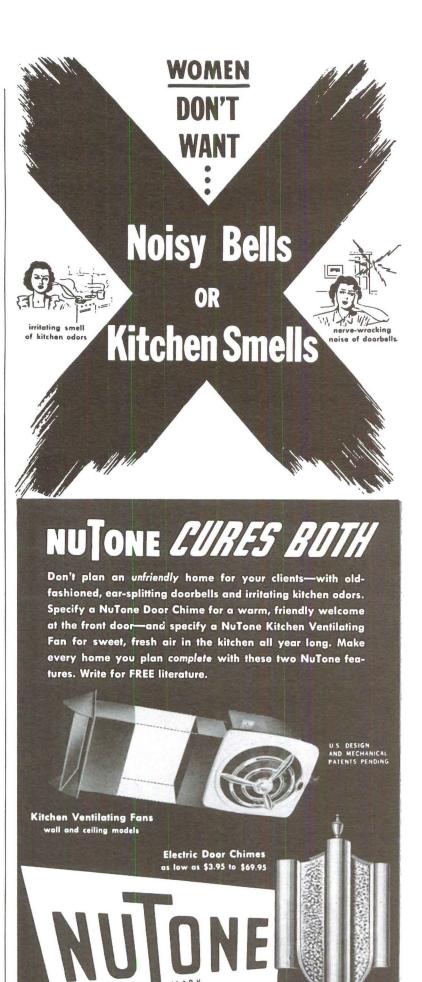
—Ledlin Lighting, Inc., 49 Elizabeth
Street, New York 13, N. Y. A, D, B.

(462) Contemporary Lamps. Full information; good line of contemporary lamps; well designed.—Lamps, Ltd... 368 Sutter Street, San Francisco 8 California. A, D, DR, B, PB, ID, AS, C.

Contemporary Lamps: Information 3-way swing table and floor lamps in modern mode by Hosmer; entirely new design combines functionality of gooseneck, swing arm, advances beyond both; arm with two rotating sprung friction joints permits full 3-way swing in infinite variety of posi-tions; floor lamp telescopes 5-7"; in-



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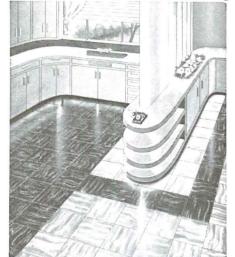
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stantly transformable into torchiere, bridge lamp or directional spot; choice of brush brass, brushed cadmium or copper finish; shades in cloth or acorn aluminum spin.—Hosmer Lamps, 1422 Grant Avenue, San Francisco, Calif. A, D, DR, ID, AS, C.

• (339 Contemporary Lamps, Lighting Fixtures: Brochures, folders exciting contemporary residential lamps, fixtures; residential, commercial use; well illustrated, data-packed; well designed, engineered; wide ranges of finishes.—Kurt Versen Company, 4 Slocum Englewood, New Jersey. A, D, DR, B, PB, ID, AS, C.

(825) Contemporary Lighting Fixtures: Brochure illustrating complete selection architectural lighting fixtures for every purpose—General Lighting Company, 8336 West Third Street, Los Angeles 48, California. A, D, DR, B, PB, ID, AS, C.

(782) Fluorescent Luminaries: New two-color catalog on Sunbeam Fluorescent Luminaries; clear, concise, inclusive; tables of specifications; a very handy reference.—Sunbeam Lighting Company, 777 East Fourteenth Place, Los Angeles 21, Calif. A, D, DR, B, PB, ID, AS, C.

• (911) Glareless Lamps: Brochure glareless Lam Lamp, contemporary design, which provides well diffused light which can be directed where needed; lacquered parchment diffuser snaps inside rim of shade; birch base, rod and goose-neck of lacquered brush brass; laminated natural fabric and parchment shade; inexpensive.—The Lam Workshop, 63-A Summer Street, Somerville 43, Mass. A, D, DR, B, PB, ID, AS, C.

• (375) Lighting Fixtures: Brochures, bulletins Prylites, complete line recessed lighting fixtures, including specialties; multi-colored dining room lights, automatic closet lights; adjustable spots; full technical data, charts, prices.—

Prime & Company, Inc., 140 North Towne Avenue, Pomona, Calif. A, D DR, B, PB, ID, AS, C.

(26a) Lighting Guide: Factual, wel' illustrated 16-page lighting guide featuring several architecturally designed lines for commercial and institutional installation available in various sizes for both fluorescent and slimline units; features matching fixtures in several sizes of 2, 3, and 4 lamps or more; a complete line of incandescent display lights are also shown; these are good products, guide belongs in all files.—Garden City Plating & Manufacturing Company, 1750 North Ashland Avenue, Chicago 22, Ill. A, D, ID.

(392) Luminaire: Brochure newly designed Zenith luminaire; Polystyrene full details spotlights, floodlights, stripplastic side panels ribbed to permit proper light distribution while reducing surface brightness to minimum; individual or continuous mounting.— Smoot-Holman Company, 321 North Eucalyptus Avenue, Inglewood, Calif. A, D, DR, B, PB, C.

(910) Theatrical Lighting: Smartly designed 48-page catalogue showing best in contemporary theater lighting for stage, exhibits, window displays, pageants, fashion shows, dance halls, cabarets, night clubs and fairs by Century; lights, special equipment, control equipment, accessories; one of most complete workbooks published, completely illustrated and with prices; this is a must.—Century Lighting, Inc., 419 West Fiftyfifth Street, New York 19, New York A, D, DR, B, PB, ID, AS, C.

(996) Weatherproof Area Light: Catalog weatherproof column area light for gas stations, parking areas, playgrounds

and parkways; heavy steel 20½" diameter porcelain-enameled reflector with overhanging skirt; minimum glare; built-in cast aluminum splice box to add supplementary spots, floods as needed; well designed, engineered product, worth study. —Stone Manufacturing Company, 489 Henry Street, Elizabeth, N. J. A, D, DR, B, PB, C.

MISCELLANEOUS

(967) In-Wall Folding Table, Bench Equipment: Information Scheiber In-Wall Folding Table, Bench Equipment; for use in gymnasiums, halls, meeting places; simple, shallow cabinet containers; easy to handle; rubber casters will not mark light floors; good source of information for school architects.—Schieber Manufacturing Company, 12720 Burt Road, Detroit 23, Mich.

(360) Telephones: Information for architects, builders on telephone installations, including built-in data.—P. E. Dvorsky, Pacific Telephone & Telegraph Company, 740 South Olive Street, Los Angeles 55, Calif. A, D, DR, B, PB, ID, AS, C.

MOVABLE STEEL WALLS

(917) Movable Metal Walls: Catalog Mills Movable Metal Walls; practical workbook for architects, engineers, contractors on problems in flexible division of interior space; emphasizes advantages movable walls; fully illustrated, complete detailed construction drawings, specification data; probably best source of information this subject. —The Mills Company, 975 Wayside Road, Cleveland 10, Ohio. A, D, B.

PAINTS, SURFACE TREATMENTS

• (925) Portland Cement Paint: Folder L & S Portland Cement paint merit specified for use CSHouse 1950; for concrete, stucco, masonry, new galvanized iron, other surfaces; long wearing, won't absorb moisture, fire retardant; easy to apply with brush, spray; used for 30 years.—General Paint Corporation, 2627 Army Street, San Francisco, Calif. A, D, DR, B, PB, ID, C.

• (924) Sash and Trim Colors: Folder strong, durable sash and trim colors ground in treated oils; pure, light-fast pigments combied with specially formulated synthetics; won't check, crack, withstands discoloration, retains gloss, flows easily but won't run, sag; good hiding capacity; worth investigation.—General Paint Corporation, 2627 Army Street, San Francisco, Calif. A, D, DR, B, PB, C.

• (938) Paint Book: New 47-page paint book featuring General Paints: full architects' specifications, more than 200 color samples, complete catalog of finishes; full descriptions paints, enamels, varnishes, lacquers, etc.; invaluable information on finishing all surfaces, including plaster, hardwood, close-grained woods; this is a must for all files.—General Paint Corporation, 2627 Army Street, San Francisco 19, Calif. A, D. DR, B, PB, ID.

PANELS AND WALL TREATMENTS

• (902) Building Board: Brochures, folders Carrco Wallboard, which is fire resistant, water resistant, termite proof, low in cost, highly insulating, non-warping, easy to work, strong, covered with one paint coat, finished on both sides, semi-hard, and uniform; 4'x8' sheets 4' in thickness; merits close attention.—L. J. Carr Company, Post Office Box 1282, Sacramento, Calif. A, D, DR, B, ID.

• (903) Decorative Panels: Brochure full-color on Parkwood Decorative, laminated plastic panels using genuine wood veneers retaining all natural wood luster; ideal for table or counter tops, wall panels; standard and cigarette-proof grades; 24"x30" to 36"x96"; interesting product meriting close appraisal.—Parkwood Corporation, 33 Water Street, Wakefield, Mass. A, D, DR, B, PB, ID, AS, C.

(970) Douglas Fir Plywood: Basic 1950 catalog giving full data Douglas Fir Plywood and its uses; deliniates grades, features construction uses, physical properties, highlights of utility; tables on nail bearing, acoustics, bending, rigidity, insulation, condensation; full specification data; undoubtedly best source of information, belongs in all files.—Douglas Fir Plywood Association, Tacoma Building, Tacoma 2, Wash.

- (585) Etchwood Panels: Literature Etchwood, a "3-dimensional plywood" for paneling, furniture, display backgrounds; soft grain burnished away leaving hardwood surface in natural grain-textured surface; costs less than decorative hardwood plywood; entireiv new product, merits close consideration. Davidson Plywood & Lumber Company, 3136 East Washington Boulevard, Los Angeles, Calif. A, D, DR, B, PB, ID, C.
- (796) Hard Board Panels: Brochure, data, sample new controlled process hard board for walls, ceilings, partitions, shelves, furniture, cabinets; smooth surface, exceptionally resistant to abrasions, cracking, chipping, splintering, denting, breaking; can be installed with ordinary tools.—Alport Associates, 620 Equitable Building, Portland 4, Ore. A, D, DR, B, PB, ID, AS, C.

(997) Metal Wall Tile: Information Crown Steel Wall Tile; will not rust, chip, crack, craze, peel; lightweight, does not require heavy substructure; wide color range, available in stainless steel; a surety bond supplied for each installation; product warrants close appraisal.—Ohio Can & Crown Company, Massilon, Ohio. A, D, B, ID, AS.

Massilon, Ohio. A, D, B, ID, AS.

(998) Plastic Wall Tile: Full color folder Pittsburgh Interlock Plastic Wall Tile, including chart of 16 plain and barbleized colors; made of polystyrene, does not contain or absorb moisture; lightweight, can be installed on any straight structurally sound wall or ceiling area; self-aligning, each tile locked in place, excellent product, well worth consideration.—Jones & Brown, Inc., 439 Sixth Avenue, Pittsburgh 19, Pa. A, D, B, ID, C.

(951) Translucent Corrugated Pane

• (951) Translucent Corrugated Panels: Full-color brochure Alsynite translucent corrugated glass fiber laminated panels which cuts, punches with common tools and adheres with translucent mastic; wide range pastel colors; light weight, will bend, fire-resistant, acid resistant; 25%" and 1½" corrugations, 26" to 40" wide and 8' to 10' long; remarkable decorative product, indoor and outdoor uses; merit specified for CSHouse 1950.—O'Morrow Corporation, 4509 Firestone Boulevard, South Gate, Calif. A, DE, B, PB.

PLUMBING FIXTURES, ACCESSORIES

(826) Bathroom cabinets: Folder bathroom cabinets, one piece drawn steel bodies, bonderized after forming; also chrome bath accessories and wall mirrors.—F. H. Lawson Company, Cincinnati, Ohio. A, D, DR, B, PB.

• (668) Bath Fixtures: Information Case contemporary bath fixtures, including T/N Water Closet, free standing non-overflow fixture; also complete line well designed lavatories.—W. A. Case & Son Manufacturing Company, 33 Main Street, Buffalo 3, N. Y. A, D, DR, B, PB, AS, C.

• (477) Harcraft Plumbing Fixtures: Brochure full information new line bath accessories in good contemporary design; clean, efficient, practical; used in CSHouse Number 18.—Harvey Machine Company, 6200 Avalon Blvd., Los Angeles, Calif. A, D, DR, B, PB, C.

• (971) Lighted Bathroom Cabinet: Folder Milwaukee Fluorescent Bathroom Cabinet; completely recessed lighting provides very high level diffused illumination; flush mirror; four 20-watt fluorescent tubes shielded with Corning Albalite translucent opal glass; simply designed, well engineered, soundly fabricated; merit specified for CSHouse 1950.—Northern Light Company, 2051 North Ninenteenth Street, Milwaukee, Wis. A, D, B.

(18a) Plastic Lavatories: Information on Durable Plastic Lavatories made of thick shatter-resistant Lucite or Plexiglas; lightweight, will not chip, rust, stain; will withstand boiling water; pastel pink, green, blue, and white; small size, for use extra bathrooms, trailers, boats, planes; standard faucets, drains; merit investigation.—Durable Formed Products, Inc., 6 Greene Street, New York, N. Y.

• (952) Shatterproof Shower Doors: Folder new Ripple-Lite shatterproof shower doors; all sizes, types shower doors, tub enclosures; polished aluminum frames, simply designed, Alsynite Fiberglas laminate panels; major savings due to lighter weight than comparable products and complete absence of replacement costs; good products, merit specified for CSHouse 1950.—O'Morrow Corporation, 4509 Firestone Boulevard, South Gate, Calif. A, DR, D, B, PB.

• (953) Stainless Steel Shower Floor: Information Permafix one-piece stainless steel shower floors; leakproof, skid-proof, permanent, sanitary, easily installed; heavy deep-drawn stainless steel, underside coated with sound deadening asphalt rubber emulsion; costs less than tile; this is sensible product, merit specified for CSHouse 1950.—The O'Morrow Corporation, 4509 Firestone Boulevard, South Gate, Calif. A, D, DR, B, PB.

(55) Water Heaters, Electric: Brochure, data electric water heaters; good design. — Bauer Manufacturing Company, 3121 W. El Segundo Boulevard, Hawthorne, California. A, D, DR, B, PB, C.

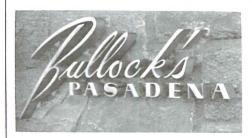
RADIOS

(532) Custom Built-In Sound Equipment: Information equipment giving broadcast quality, custom sound, television, record playing, recording; servicing architects, decorators, furniture dealers; demonstrations by appointment, Gr 7606—20th Century Design, 8923 Beverly Boulevard, Los Angeles 48, Calif. A, D, DR, B, PB, ID, AS.

• (27a) Custom Radio-Phonographs: Information Gateway To Music custom radio-phonograph installations; top quality at reasonable cost; wide variety custom-built tuners, AM-FM, amplifiers, record changers including three-speed changers which play consecutively both sides all types of records; television, magnetic recorders, other optionals; cabinets also available; five-year parts, labor warranty; merit specified for CSHouse 1950.—Gateway to Music, 3089 Wilshire Boulevard, Los Angeles 5, Calif.

• (948) Record Changer: Literature, data new Markel 3-speed Playmaster, only complete 3-speed changer that automatically plays all speeds and all sizes of records and automatically plays

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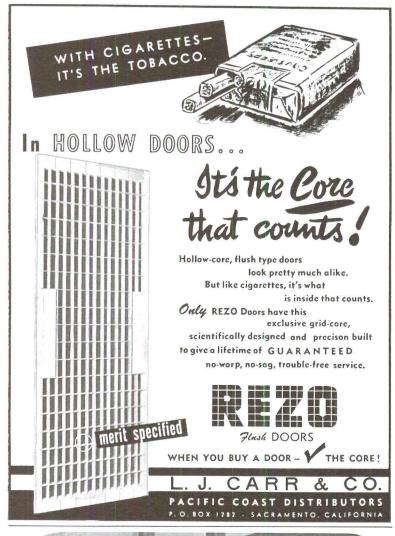
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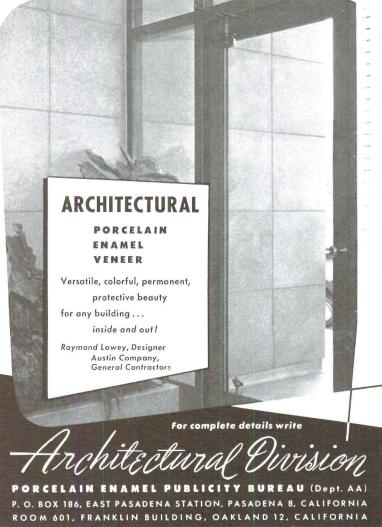


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both sides of 10" and 12" records continuously in sequence; handles 12 12" 33-1/3 records for total of 9 hours playing time; remarkably well engineered; this item must for all interested in sound equipment.—Markel Electric Products, Inc., 145 Seneca Street, Buffalo, N. Y. A, D, DR, B, PB, ID, AS, C.

SASH, DOORS AND WINDOWS

(522) Awning Windows: Brochure Gate City Awning Windows for homes, offices, apartments, hotels; controlled by worm and gear drive operating two sets of raising mechanisms distributing raising force to both sides of sash; standard and special sizes; contemporary design.—Gate City Sash & Door Company, 15 Southwest Third Avenue, Fort Lauderdale, Fla. A, D, DR, B, PB, AS, C.

(19a) Decorative Glass: "Modernize Your Home with Decorative Glass" is the title of new Mississippi Glass Company booklet featuring actual photographs that show how figured glass adds charm to the home; enlivens and brightens every room in the house; makes each radiant with interest; free copy on request.—Mississippi Glass Company, 88 Angelica Street, St. Louis 7, Mo.

(356) Doors, Combination Screen-Sash: Brochure Hollywood Junior combination screen-metal sash doors; provides ventilating screen door, sash door, permanent outside door all in one.—West Coast Screen Company, 1127 East Sixty-third Street, Los Angeles, Calif. A, D, DR, B, PB, C (in 11 western states only).

(824) Drapery Hardware, Venetian Blinds: 32-page booklet "Smart Window Styling" illustrating 85 different window treatments; features Kirsch drapery hardware and venetian blinds; price 25 cents.—Kirsch Company, Sturgis, Michigan. A, D, DR, B, AS, ID, PB, C.

(151) Folding Doors: Idea-packed 12-page brochure Modern-fold doors; accordian-type folding walls, top hung, no floor track; metal frame with leatherette cover; good contemporary design accessory.—New Castle Products, New Castle, Ind. A, D, DR, B, PB, ID, AS,

• (972) Heat Absorbing, Glare Reducing Glass: Helpful, informative 12-page catalog featuring Mississippi Glass Company's Heat Absorbing, glare reducing Coolite glass; shows typical industrial and other applications; presents facts based on independent laboratory tests covering properties of glass; contains heat and light transmission tables, specification data.—Mississippi Glass Company, 88 Angelica Street, St. Louis 7, Mo. A, D, B, PB.

• (901) Hollow Core Flush Door: Brochure Paine Rezo hollow core flush door featuring interlocking air-cell grid core combining the strength of crossbanded plywood with lightness in weight; accurately mortised and framed together, and overlaid with matched resin-glued plywood panels; one of best products in field.—L. J. Carr and Company, Post Office Box 1282, Sacramento, Calif. A, D, B, DR, PB, AS, ID, C.

• (930) Metal Window, Door Casings: Folder Milcor Steel window, door casings; simple, clean, good for contemporary houses; solid or expansion wings; all styles straight, uniform, permitting good mitres at corners, neat, invisible union with plaster surfaces.—Inland Steel Products Company, Box 393, Milwaukee 1, Wis. A, D, DR, B, PB.

(24a) Reversible Action Sash Hardware: Folder Whitco reversible action sash hardware permitting two-side window cleaning from inside; adaptable to all casements, awning-type windows or transoms regardless of size, style; wind-holder stops slamming from wind-pressure, yet always free-acting, sagproof; eternaplated steel or perpetual solid brass; interchangeable, fits either right or left swinging casements, top or bottom hung awningtype windows; full specification, installation data; well designed, engineered; worth investigating.—Vincent Whitney Company, P.O. Box 335, Sausalito, Calif.

• (927) Rubber Weatherstripping: Brochure, folders Bridgeport Inner-Seal Weatherstripping; spring wire, rubber construction; remarkable wearing qualities, easy to install; waterproof, won't stain sills, resilient, inexpensive; a remarkably well engineered product merit specified for CSHouse 1950.—Bridgeport Fabrics, Inc., 165 Holland Avenue, Bridgeport 1, Conn. A, D, B, DR, PB. AS, ID, C.

(999) Self-Storing Window Screens: Permanent, rustproof Screen-o-Matic, a disappearing window screen; improved plastic screening on aluminum roller all enclosed in aluminum housing; mounted on outside lower window sash; unrolls to cover opening as window is raised; rolls back up automatically when lowered; left on year round; saves storage, painting; gives more light, longer life, easier window washing; anyone can install; low in cost; worth thorough investigation.—Lockhart Manufacturing Corporation, 6350 East Davison Avenue, Detroit 12, Mich. A, D, DR, B, PB, AS, C.

• (550) Windows, Horizontally Sliding: Folder Steelbilt horizontally sliding windows, doors; wide range stock sizes adaptable to contemporary design; narrow mullions, muntons; outside screens. Steelbilt Inc., 4801 E. Washington, Los Angeles, Calif. A, D, DR, B, PB, AS, ID, C.

SPECIALTIES

• (1a) Door Lookout: Information new B-Safe wide angle door lookout; glass optical system encased in slender cylinder of lock metal with silent-operating eyepiece shutter; wide angle lens system permits viewer to inspect those outside in full figure, but visitors cannot see in; easily installed wood or metal doors up to 2" thickness; tamperproof, well designed; merit specified for CSHouse 1950.—Danca Products Corporation, 52 Broadway, New York 4, N. Y.

(209) Flock, Flock Finishing: Booklet (32 pages) flock, flock finishing; process of coating short fibers on surfaces to velvet-like pile finish; contains actual color samples.—Behr-Manning Corporation, Troy, N. Y. A, D, DR, B, PB, ID, AS, C.

(21a) Folding Stairway: Information EZ-Way Folding Stairway; light pull on cord brings stairway through trap door; light push sends it back up; brings more usable space to homes, cottages, garages; well conceived product meriting consideration. — Minnesota Wood Specialties, Inc., Post Office Box 216, St. Paul Park, Minnesota. A, D, B, AS.

• (913) Lightweight Core: Brochure Parkwood Honeycomb, very lightweight core material for use between sheets of aluminum, plywood, veneer, decorative laminate; various grades range in compressive strength from 50 to 250 lbs. per square inch; ideal for doors, furniture, sliding panels; inexpensive.—Park-Wood Corporation, 24 Water Street, Wakefield, Mass. A, D, DR, B, PB, AS.

(937) Magnetic Tape Recorder: Brochure high fidelity magnetic tape recorder for custom installation in studios, schools, houses, industrial plants; instantaneous monitoring from tape while recording, separate heads for high frequency erase, record, playback; well engineered, reasonably priced.—Berlant Associates, 9215 Venice Boulevard, Los Angeles 34, alif. A, D, DR, B, PB, ID, AS. C.

(2a) Plastic Numerals: Information new line plastic numerals for door, house numbers, other exterior-interior uses; luminous polystyrene, red fluorescent acrylic, gold acrylic, silver acrylic, black acrylic: 4½" high, well designed for readability; impervious to weather conditions, won't corrode, never need painting; good product, worth investigation.—Gits Molding Corporation, 4600 West Huron Street, Chicago 44, Ill.

(25a) Prefabricated Chimney: Folder entitled "Vitroliner Type 'E' Flue"; functions as a complete chimney for all home heating equipment; individually designed to fit the particular roof pitch of house with tailor-made roof flashing and flue housing; made of heavy-gauge steel, completely coated with acid-resisting porcelain; low initial cost; installs in two hours, light weight, saves floor space, improves heating efficiency, shipped complete in two cartons; listed by UL for all fuels; good product, definitely worth investigation.—Condensation Engineering Corporation, 122 South Michigan Avenue, Chicago 3, Ill. A, D, B.

(20a) Silicone Water Repellent: Manual on exterior masonry waterproofing, featuring Crystal silicone water repellent; invisible after application; does not change color or texture of surface; makes surfaces stainproof, prevents efforescence; repels water throughout entire depth of penetration; one coat sufficient, can be applied at any temperature; product merits investigation.—Wurdack Chemical Company, 4975 Fyler Avenue, St. Louis 9, Mo. A, D, B, PB.

(23a) Swimming Pools: Well prepared book "Planning Your New Swimming Pool" giving full data Paddock swimming pools; nationally known, widely accepted; one of best sources of information on subject. — Paddock Swimming Pools, 8400 Santa Monica Boulevard, Los Angeles 46, Calif. A, D, B.

TILE

(973) Deep Setting Furring Cement: Information Acorn Furring Cement; sets wood trim, base, panel furring or floor sleepers to concrete and masonry without plugs, bolts or any other mechanical support; sets trim in straight lines without shims or spacers; solid in 90 minutes; test show high strength.—Acorn Adhesives & Supply Company, 1011 West Eleventh Street, Los Angeles 15, Calif. RIchmond 7-5338. A, D, B, PB, AS, C.

STRUCTURAL BUILDING MATERIALS

(943) Aluminum: Informative booklet on aluminum point out that often excellent production economies can be made by using aluminum in place of other materials; complete descriptions various forms in which Revere aluminum is fabricated; illustrations, charts, tables giving properties, characteristics of most wrought aluminum alloys. Revere Copper & Brass Inc., 230 Park Avenue, New York, N. Y. A, D, DR, B.

(933) Custom Stock Store Front Metals: Information Kawneer Custom-Styled Stock Metals for store fronts; permit custom styling, clean-lined simplicity, modern design through use of Kawneer stock metals; less costly than ing, detailing; good product, worth made-to-order specials; eliminates draft-thorough investigation.—The Kawneer Company, 289 North Front Street, Niles, Mich. A, D, DR, B, PB, AS.

(3a) Interlocking Building Block: Information new Hydro-Stone interlocking building block; made entirely from waste materials, eliminates use of mortar; resembles cut stone, granite or marble; made with patented tongue and-groove design within tolerances of 5/1000"; mastic put on with hand spray gun as assembled insures against moisture; contents include sand, oyster shells, iron ore waste, crushed brick, coal mine tailings, stone dust, or whatever material is most available locally; remarkably inexpensive, worth consideration; manufacturing franchises now open.—Hydro-Forged Stone Associates, Inc., 434 Bulkley Building, Cleveland, Ohio. A, D, B.

(22a) New Gypsum Wallboard: Information new type Firestop Bestwall gypsum wallboard; single 5%" layer on both sides load-bearing wood stud partition has fire-resistance rating of one hour; single ½" layer on same construction has 45-minute fire-resistance; carries UL seal; incombustible ingredients added to gypsum core; strong, rigid, dimensionally stable, will not crack, warp, buckle; cuts easily; can be used for interior walls, partitions; smooth ivory surface. — Certain-teed Products Corporation, 120 East Lancaster Avenue, Ardmore, Penna. A, D, B, AS.

(712) Sliding Steel Doors: Side Sliding steel doors and fixed sash for large glass areas in residential and commercial buildings; high quality, fully guaranteed; assembled at factory and delivered ready for installation; standard types and sizes illustrated details given: Arcadia Metal Products, 324 North Second Avenue, Arcadia, Calif. A, D, DR, B, PB.

VISUAL MERCHANDISING

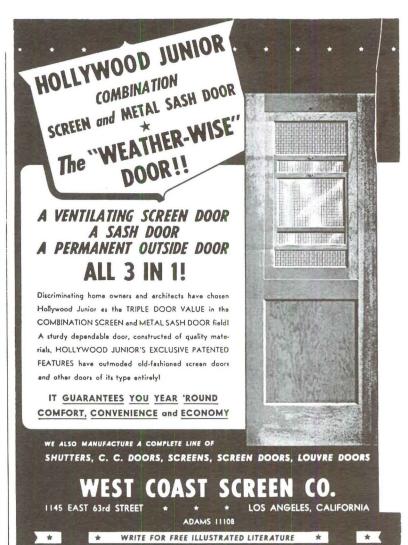
(939) Visual Merchandising Presentations: 80-page brochure of metal display and merchandising fixtures; merchandising ideas and suggestion, layouts, presentations, all affording maximum display space in minimum floor area; this is, without a doubt, one of the best manuals of its type offered today.—Reflector-Hardware Corporation, Western Avenue at Twenty-second Place, Chicago 8, Ill. A, B, D.

WALL COVERING

(4a) Fabric Wall Coverings: Information, samples Authority Line Fabric Wall Coverings; wide variety patterns, decorator colors; custom produced, permanently washable, permanently crackresistent; reasonably priced; worth investigating.—Standard Coated Products Division, Interchemical Corporation, Empire State Building, New York 1, N. Y.

WATERPROOFING

(974) Waterproofing, Dampproofing: Office test kit, data on Formula No. 640; a clear liquid sealer penetrating deeply into masonry surfaces; hydrocarbon solvent evaporates leaving pores filled with a balanced formula of seven waxes, resins.—Haynes Products Company, 4007 Farnam Street, Omaha 3, Neb. A, B, D, PB, DR.



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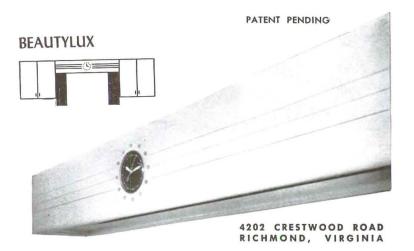
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ADDITIONAL PRODUCTS MERIT SPECIFIED FOR 1950 CASE STUDY HOUSE

Editor's Note: Following are further products which have been merit specified for use in the 1950 Case Study House of the magazine Arts & Architecture. New products merit specified will be announced each month

ALUMA-LIFE LIGHT WEIGHT ROOFING MATERIAL

Aluma-Life light weight roofing material, manufactured by Aluminum Building Products, Inc., Jacksonville 7, Fla., utilizes aluminum foil between cotton gum base layers and is finished with a coating of marble or granite chips of selected color. It has earned an "A" rating from the National Board of Fire Underwriters and is FHA approved. It can be easily applied, and is more economical than roofs carrying lower ratings, part of the economy being accounted for by the elimination of all metal flashings on chimneys and valleys. Aluma-Life is the only built-up roofing with hurricane specifications, bonded direct to wood sheathing which can be used on pitches of 5 on 12 and up. Its unique advantage is the use of the aluminum foil interlayers and the very stable sealing and bonding compound used throughout. The 99.4 pure aluminum foil, when embedded in Aluma-Bond, a cotton gum base which is the essential mastic, will last indefinitely.

DODGE VINYL-CORK TILE

Dodge Vinyl-Cork Tile, manufactured by the Dodge Cork Company, Inc., Lancaster, Pa., combines the long acknowledged advantages of cork with the toughness of a vinyl surface. The cork base and vinyl top are fused together under extreme heat and pressure to form an integral unit. Dodge Tile has a resilience and warmth, and it is quiet and comfortable to walk on. It has high insulating and sound deadening qualities, and is strongly resistant to fire. Requiring no waxing, it cleans with ordinary soap and water. Inks, grease, acids, or mild alkalis will not mar its surface. Wearing qualities are two or three times that of most other smooth floor coverings. It comes in natural cork, several good plain colors, and a number of marbleized colors.

GATEWAY TO MUSIC'S "BEL CANTO" RADIO-PHONOGRAPHS

One of the Gateway to Music's Radio-Phonograph installations was merit specified for the 1950 Case Study House because it provides an ideal music reproduction system for the home. It offers top quality at a cost even lower than ordinary mass-produced instruments. Musical and technical experts, including Arthur Schnabel, Otto Klemperer, George Szell and physicist Dr. Harry T. Wensel have singled out this equipment for highest praise. A wide variety of custom-built Radio Tuners (AM and FM), Amplifiers, Record Changers (including a radically new three-speed changer which plays consecutively both sides of all types of records, yet fits into a very compact space) are available. Television, Magnetic Recorders and other "optionals" can be provided to complete the most up-to-date "Home Entertainment Center". All units are so designed to be interchangeable and a large variety of combinations can be arranged in accordance with the owner's budget, his musical tastes, the acoustic conditions of the room and the space available. Where installation in a cabinet is preferred to a built-in installation, the owner may choose from a large selection of well designed and executed functional cabinets or have the equipment installed in his own cabinet. A staff of experts is maintained to consult with architects and decorators, to make the installation, provide maintenance service. Note the very unusual "Five Year Warranty", covering parts and labor. On sale only at the GATEWAY TO MUSIC (no other sales representatives in Southern California.) Address: 3089 Wilshire Boulevard, Los Angeles 5.

B-SAFE WIDE ANGLE DOOR LOOKOUT

A new device providing protection from intrusion by unwelcome visitors, the B-Safe Door Lookout consists of a glass optical system encased in a slender cylinder of lock metals, supplied with a silent-operating eye-piece shutter. Unlike previous peep-holes, this new door lookout can't be seen through from the outprevious peep-noies, this new door lookout can't be seen through the outside. Through the use of a wide angle lens system the viewer can inspect a visitor full figure, even at close range, without the visitor being aware of the inspection. It is easily installed in all doors, wood or metal, up to 2" thick. Once locked into place, it is tamperproof. This is a much needed, well designed product, manufactured by the Danca Products Corporation, 52 Broadway, New York 4, New York.

JOHNSON-CARPER PRIZE-WINNING FURNITURE

These case goods pieces were designed by Robin Day and Clive Latimer of England and won first prize in the Museum of Modern Art International Competition for Low-Cost Furniture Design. They include standard adaptions by Edmond J. Spence, Inc., as American consulting designers. The Johnson-Carper Furniture Company, Inc., Roanoke, Va., has been named as exclusive manufacturer and distributor in the United States. Pieces are clean, fresh, simple.

ROTIR ELECTRIC BARBECUE SPIT

This unit, judged the most versatile electric barbecue spit, is well engineered. It has seven 28' stainless steel Kabob skewers revolving simultaneously over a charcoal fire. It has a sturdy stainless steel roasting spit, and a drawer-like action so the working portion slides in and out. The frame sets on the same layer of brick and the fire is on, eliminating burning out of metal parts. The frame is heavy angle iron welded. The unit is equipped with a gear head motor, gears running in oil, sturdy steel case sealed in simulated old copper. Motor will not produce radio interference.

ALLEN RUBBER-LOC RUBBERIZED WAFFLED RUG CUSHION

Allen Rubber-Loc is America's first and only scientifically designed rubberized waffled rug cushion. It has been approved for all types of contract installations in homes and buildings, and greatly increases the life of rugs and carpets. It is composed of pure rubber and durable fibers scientifically blended to produce maximum walking comfort. It was the winner of a 1950 national annual home safety award sponsored by Lewis & Cogner, New York. It is available in 27, 36, and 54 inch and 6, 9, and 12 foot seamless widths. The manufacturer is Allen Industries, Inc., Leland and G. T. R. R., Detroit 7, Mich.